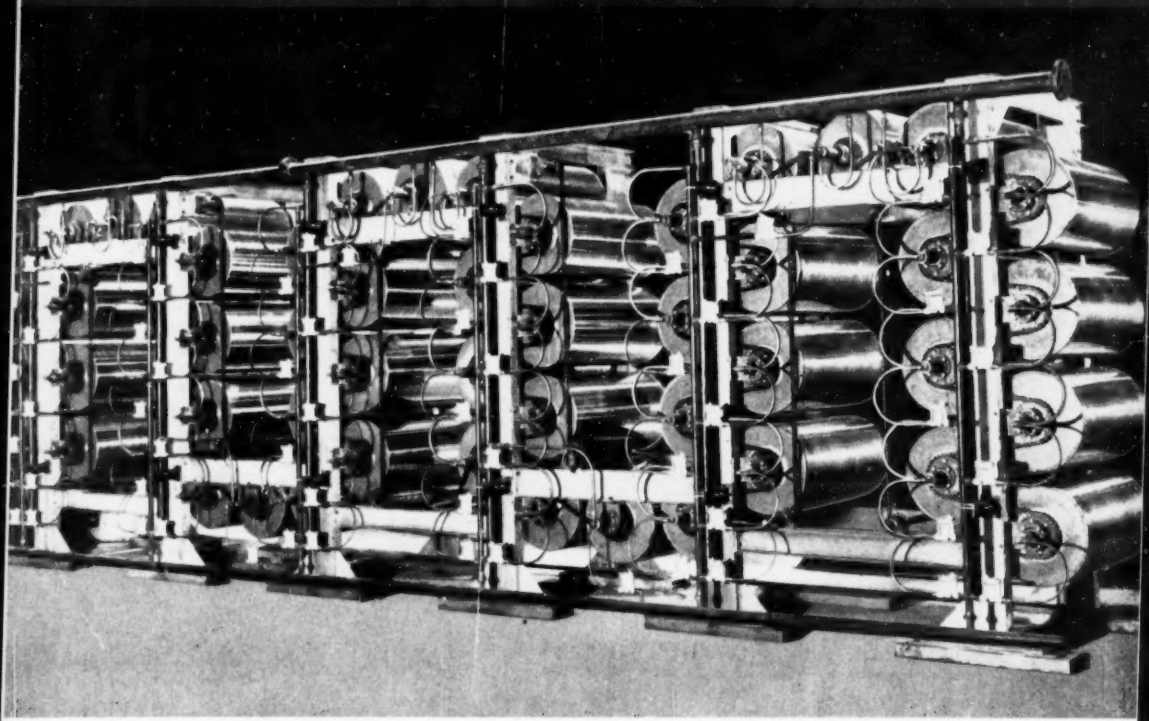
AUGUST, 1952

Textile Industries

formerly
COTTON
Textile Industries



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► Slasher Cylinders
► Size Kettles, Dye Tanks
► Rolls and Special Machines
► Built by Textile Shops, Spartanburg, S. C.

A.S.M.E. Code Construction

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Volume 116 Number 8

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with CENTER FORK FILLING MOTION and RATCHET TAKE-UP

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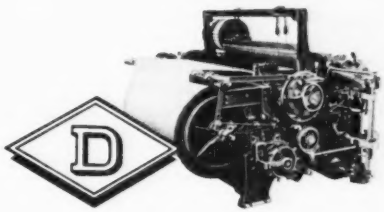

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Textile Industries
COTTON
Volume 116, Number 8
August, 1952

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Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia

For names and addresses of editorial and business representatives, see page 169

Royal blue shades

on nylon or wool

Du Pont Anthraquinone Milling Blue BL

The royal blue shades come from a bright acid blue dye that possesses outstanding fastness properties. On nylon, it exhibits a high degree of light fastness and wet fastness, particularly in pastel and medium shades. On wool, it gives fastness results comparable to nylon in most cases. This dye is valuable for union dyeing and as a wool shading element.

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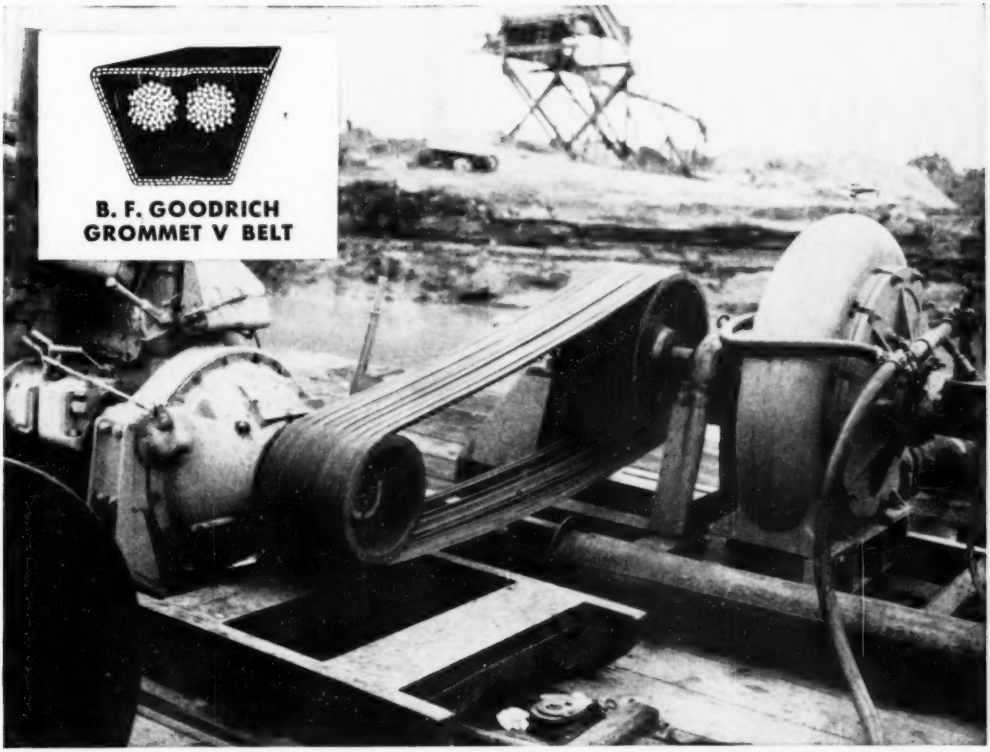

Where B. F. Goodrich grommet belts are outlasting others 2 to 1

B. F. Goodrich grommet V belts cut costs 20 to 50%

THOSE nine belts run a sand pump 10 hours a day, 6 days a week. Ordinary V belts had to be stretched extra tight in order to run the heavy pump. In addition to causing bearing wear, the tight fit pressed sand into belts and pulley, resulting in serious wear on both. When B. F. Goodrich grommet V belts were installed, it was found they gave good gripping action, even though not tightened. With belts running at less tension, abrasive wear was cut way down, belt and pulley life doubled, and heavy bearing wear in the motor eliminated. Here's the reason B. F. Goodrich grommet V belts outperform ordinary belts:

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Better grip, less slip — Because a grommet is endless, a grommet V belt is more flexible, grips the pulleys better. Size for size, grommet multiple-V belts will give ⅓ more gripping power, pull heavier loads with a higher safety factor.

Only B. F. Goodrich has the grommet!—No other multiple-V belt is a grommet V belt (U. S. Patent No. 2,233,294). Now available in C, D and E sections. See your local B. F. Goodrich distributor. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio* (available in Canada).

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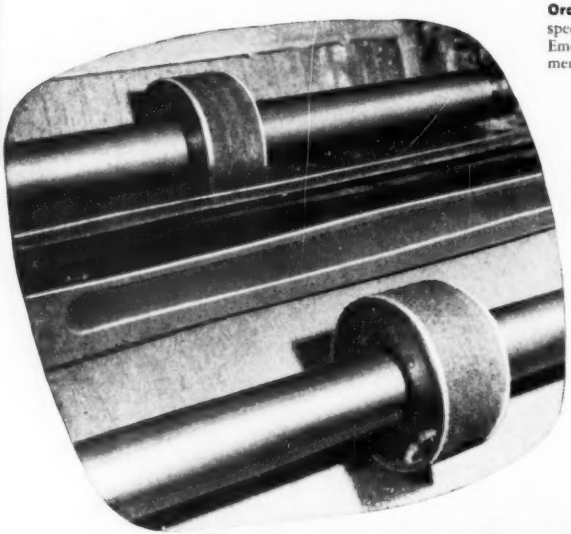

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installed in the U. S. as of January 1, 1952, producing at the average rate of 40 pounds per hour have a total capacity of 54,080 pounds per hour which is 76.6% *of the total COMBED YARN produced in the country!*

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Amazon Cotton Mills
American Thread Company
American Yarn & Processing Co.
Amoskeag-Lawrence Co.
Aragon Baldwin Mills
Div. of J. P. Stevens & Co., Inc.
Avery Process Corp.
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China Grove Cotton Mills
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School of Textiles
Clover Spinning Co.
Cluett Peabody & Co.
J & P Coats, Inc.
Continental Mills
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Dan River Mills Inc.
Dixie Mercerizing Co.
Dominion Textile Co.
Dora Yarn Mills Co.
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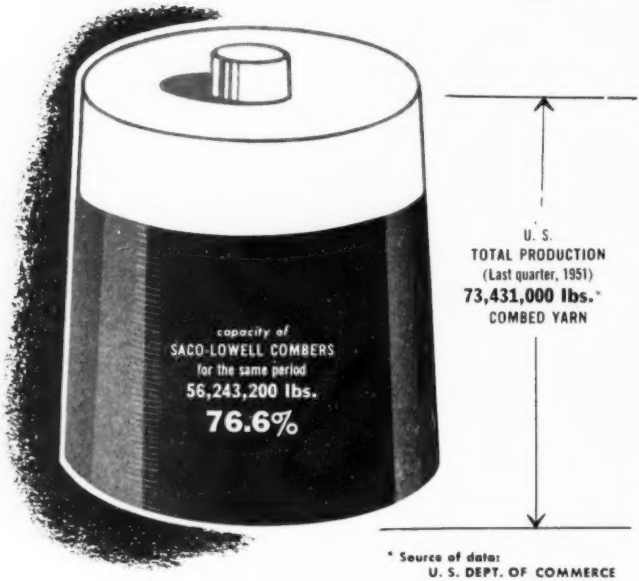

* Source of data:
U. S. DEPT. OF COMMERCE

U. S. production 73,431,000 pounds; if produced on a 2-shift basis, the hourly production is 70,607 pounds. SACO-LOWELL Combers' hourly capacity of 54,080 is 76.6%.

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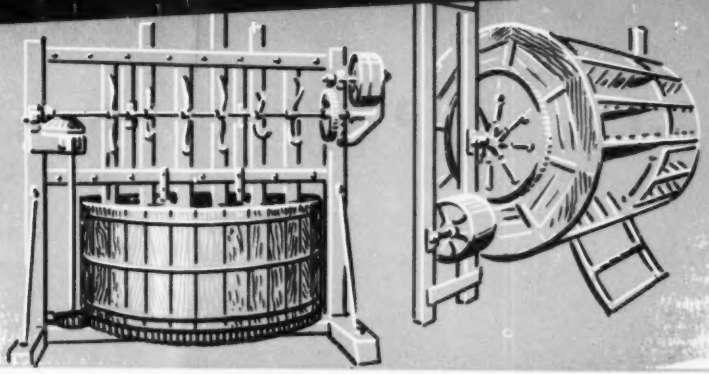

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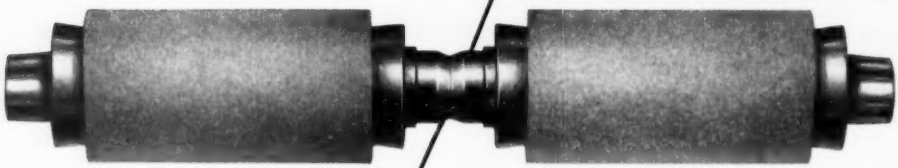
are saving time formerly required for ROLL PICKING... up to 40% and 50%!



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1. The smooth finish of the exposed metallic portions of the roll shed lint *almost automatically;* and
2. Sealed-in lubrication means that there is no surface oil to collect lint or dust.

Write for illustrated folder which gives complete data on the many features of S-L-T Top Rolls for roving and spinning. Address our nearest Sales Office.

Your frames are clean, your yarn is clean.

S-L-T TOP ROLLS are standard equipment on the new

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* Names on request.

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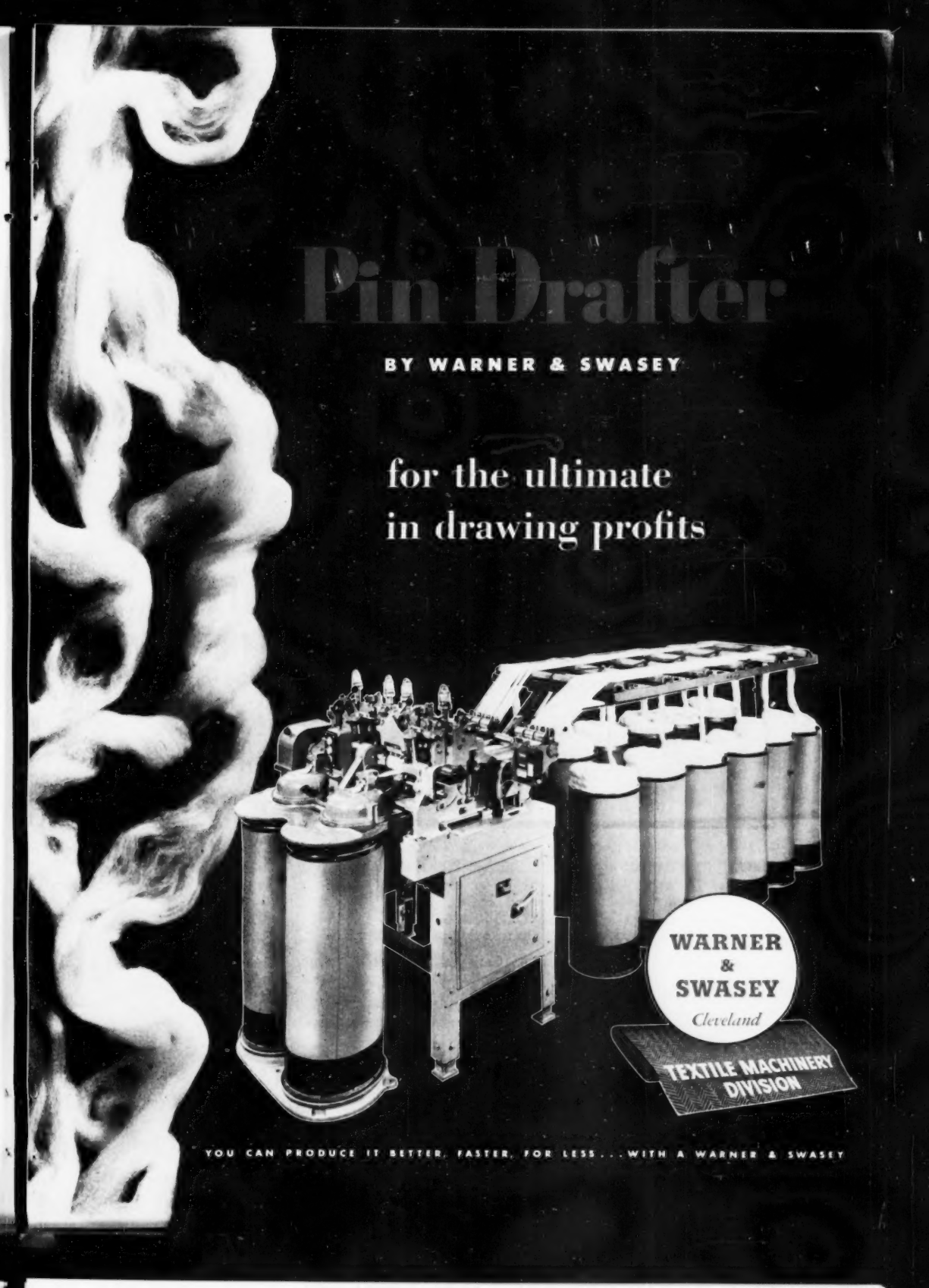
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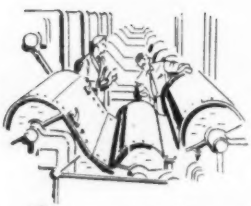
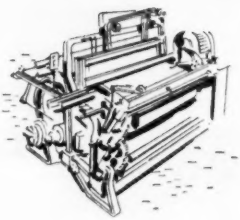
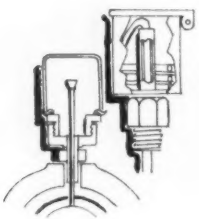


❶ survey equipment

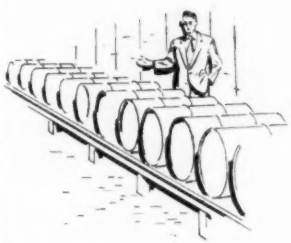


❷ specific recommendations

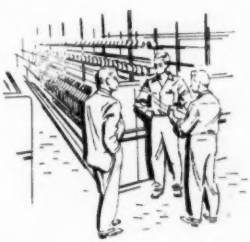
❸ lubrication charts



❹ application methods



❺ storage and handling



❻ individual problems

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GULF SERVES INDUSTRY

Mill Men Are Finding HUMIDIFICATION one of their "BEST INVESTMENTS"*

"The result of about a year's service has been quite satisfactory. The mill personnel are very enthusiastic about the service rendered by the (humidification) system."
– Chief Engineer, Canadian Cotton Mill.

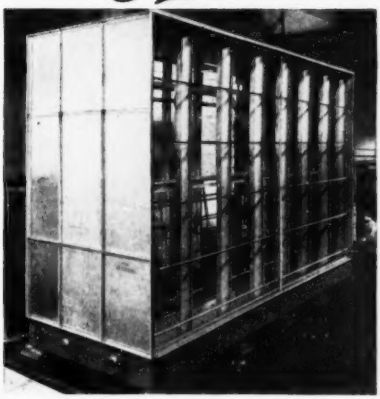
"Proper humidification lowers waste percentage with resulting savings in production costs."
– Cotton Mill President.

"The decision to install humidifying and cooling equipment in one of our knitting departments and also in a warehouse, has given excellent results. The quality of knitting has been much improved and the investment is decidedly worthwhile." – Mill Agent, Knitting Company.

"The recent humidification installation in our spinning and card rooms is one of the best investments the company ever made." – Mill President.

* Statements reported by *Textile World* in *Sales Signals*

— AND FOR BEST RESULTS *Specify* "Buffalo" FANS and HUMIDIFIERS



"Buffalo" Type "H" Humidifier nearing completion. Note sturdy galvanized steel casing.

Textile mill technicians and officials are agreeing more and more on the value of air conditioning—in particular, air washing and humidity control—both for quality control and employee morale and efficiency.

The "Buffalo" fans and humidifiers shown will provide your mill with washed, filtered, properly tempered and humidified air on a year-round basis. What's more, they will do it with an absolute minimum of expense and attention. Efficient, trouble-free "Buffalo" Limit Load Fan combined with the reliable "Buffalo" Humidifier with accessible tank; good, heavy casing; bolted, sectional construction, all simplify installation and maintenance. Why not write for Bulletin No. 3142-D for facts on the humidifier that is improving the production picture in many mills today.

"Buffalo" FIRST FOR FANS

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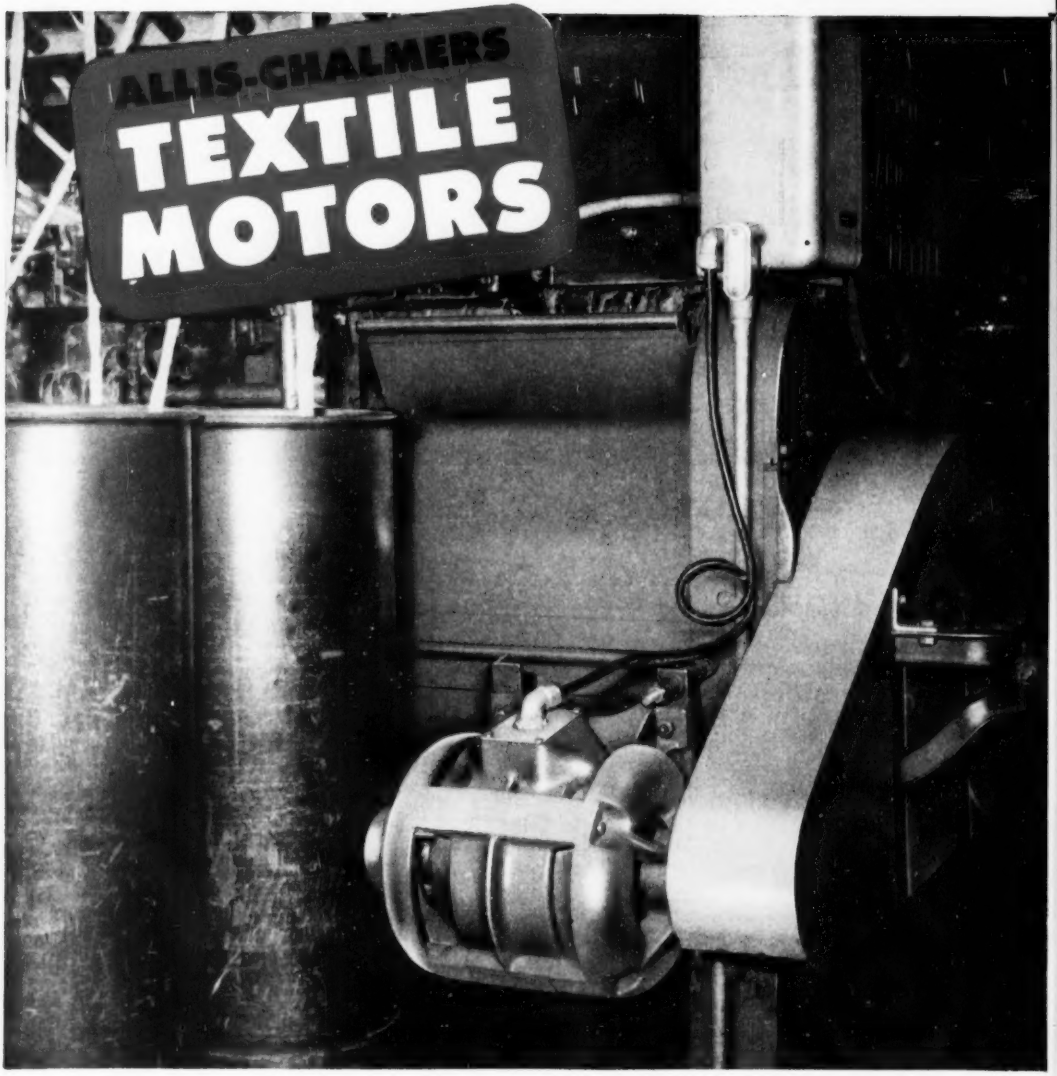
VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

Stop "Ends Down" Due To



ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

Rough Roving Frame Starts

Allis-Chalmers roving frame motor accelerates slowly and smoothly...produces uniform roving ...is unaffected by air-borne lint.

YOU CAN REDUCE ends down when starting roving frames . . . cut lost production in spinning caused by thin spots in the roving yarn . . . by using Allis-Chalmers slow-accelerating roving frame motors on your roving frames, slubbers and other yarn drawing machines. This motor is built with special slow, extra-smooth acceleration characteristics to provide even tension on the roving during starting periods.

LINT-FREE *QUICK-CLEAN* DESIGN

Quick-Clean wide open frame design allows powerful fans to sweep lint and dirt in, out and away with the cooling air. Interior surfaces are smooth and hard. Large air passages are contoured to aid air flow.

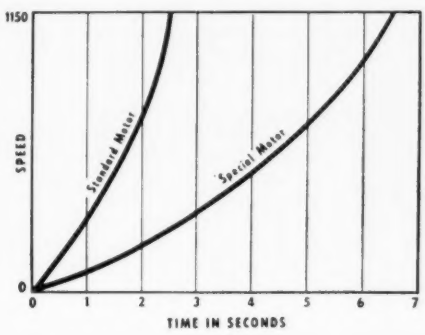
Bearings are lubricated and sealed at the factory and should need no attention for years. Grease cannot leak from the bearings to soil materials or collect dirt. Lint and dirt cannot enter bearings.

ONE SOURCE FOR COMPLETE DRIVE

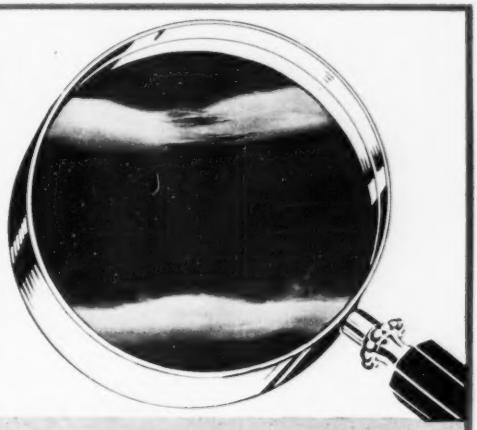
Allis-Chalmers can supply your complete machine drive needs — motor, control and *Texrope* V-belt drive — from one responsible source. Allis-Chalmers application engineers, practical men with an intimate knowledge of the textile business, will help you select exactly the right combination for your particular requirements.

For complete information on Allis-Chalmers products for the textile industry, ask your Allis-Chalmers District Office representative or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3786

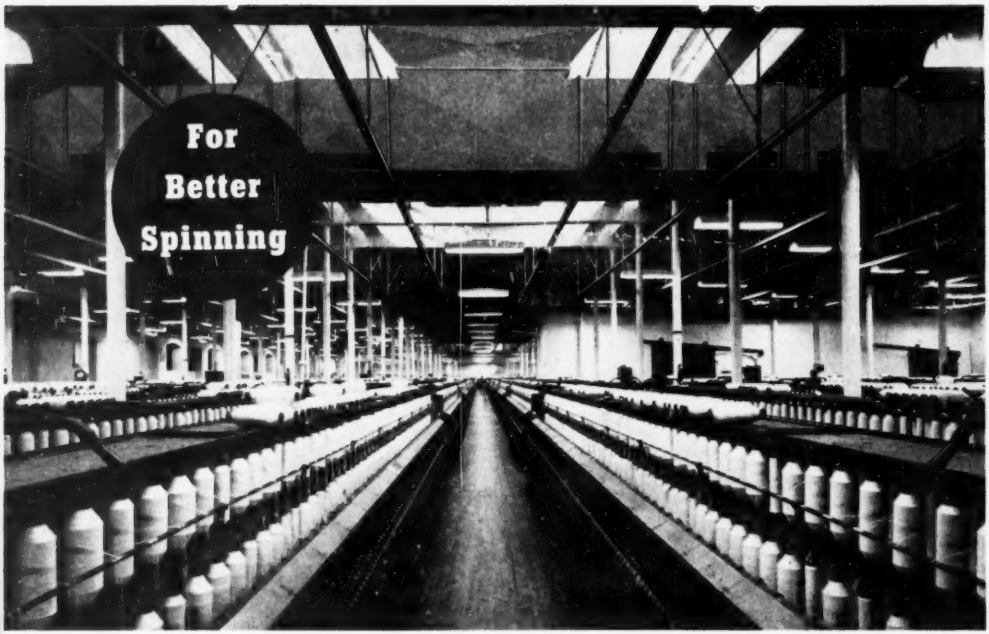
Quick-Clean and Texrope are Allis-Chalmers trademarks.



Notice how the Allis-Chalmers roving frame motor requires almost three times as long as a standard motor to reach full speed.

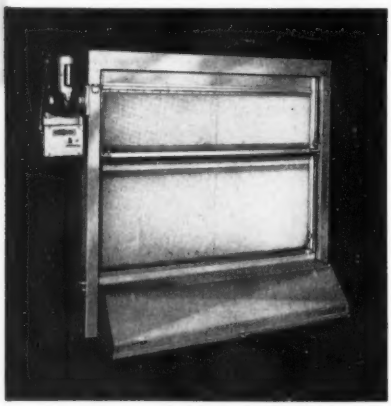


Notice thin spots in upper piece of yarn caused by rough start of roving frame. This is one of the chief causes of ends down and lost spinning production.



Bahnson CENTRAL STATION Air Conditioning

In this large Spinning Room, Bahnson Central Station Air Conditioning Systems control temperature and relative humidity for efficient operation. Improved yarn quality, reduced waste, and fewer ends-down are direct results. Machines can operate at higher speeds, regain is constant, yarn counts more even. Absenteeism is reduced and workers are more efficient in the comfortable atmosphere.



No one type of air conditioning apparatus is suited to all applications. Each fiber, each blend, each textile process requires careful study and selection of equipment so that the many benefits of air conditioning can be obtained most economically. Bahnson Central Station Systems can be designed to meet your exact needs because our engineers select from Type Y, Type DC, or Centrispray Air Washers. Bahnson manufactures the widest range of Humidification and Air Conditioning Equipment offered to the Textile Industry.

Another time and money saver for the Spinning Room is the Bahnson Type S Air Cleaner. It cuts maintenance cost by eliminating routine cleaning of lint screens at recirculated air openings. Cleaners may be used with unit or central station systems and require no replacement of filter media. Lint is automatically removed from the air and deposited in a receptacle—in most cases the lint can be fully reclaimed for further savings. No other lint filtering system costs so little—saves so much. Send for a copy of Bulletin 15A.

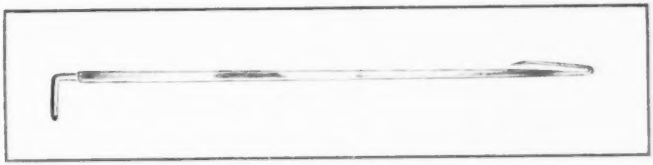
FULL VALUE . . . .
FOR YOUR AIR CONDITIONING DOLLAR

Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

the finer the denier

the sheerer the stocking

the better the needle must be!



The precise dimensional uniformity, exacting temper and smoother finish of TORRINGTON NEEDLES are your guarantee of top quality production, whatever the gauge requirements. May we show you how you can safeguard the quality of your merchandise by standardizing on TORRINGTON NEEDLES?

THE TORRINGTON COMPANY, Torrington, Conn., U. S. A.

Established 1866

Branches: New York • Philadelphia • Chicago • Greensboro, N. C. • Boston St. Louis • Bedford, P. Q. — Toronto, Canada. • *Pacific Coast Representative*: E. G. Paules, 1762 West Vernon Ave., Los Angeles 37, Calif. Broadgate House, 7-10 Eldon St., London E. C. 2, England.

TORRINGTON

SPRING BEARD NEEDLES • SINKERS • DIVIDERS • SPLIT DIVIDERS

for long, dependable service...

Torrington Needle Bearings have set outstanding service records in countless applications throughout industry. The reason is simple. Needle Bearings are made to last. The one-piece shell which serves as the outer raceway is accurately drawn from carefully selected strip steel. After forming, it is carburized and hardened, with no further grinding that might destroy the wear-resistant raceway surfaces. The precision-ground rollers are thru-hardened for long life.

Because of this careful selection of materials and precision workmanship to close tolerances, Torrington Needle Bearings provide accurate, dependable performance in the most rugged applications. Ask our engineering department to help you determine how you can use Needle Bearings to advantage in *your* product.

THE TORRINGTON COMPANY

Torrington, Conn. South Bend 21, Ind.

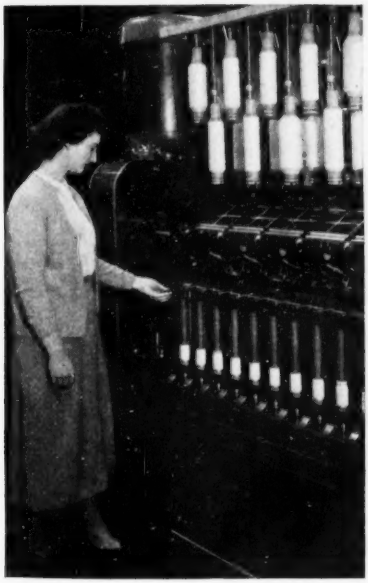
District Offices and Distributors in Principal Cities of United States and Canada

TORRINGTON NEEDLE BEARINGS

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y. August, 1952



NEW MODEL OF EUROPEAN GEAR-DRIVEN SPINNING MACHINE INSTALLED BY AVISCO

Experimental quantities of yarn with commercial qualities are being produced by a "Perfect" Spinning Machine with 320 gear-driven spindles recently installed by Avisco in its Textile Research Department at Marcus Hook, Pa. This type of machine has been in service since before the last war in several countries in Europe, but it is relatively new in this country.

The machine is designed to handle 100 per cent rayon, rayon and natural fiber blends, or 100 per cent worsted yarns in lengths ranging from 1½ to 9 inches. The drafting element is composed of a broad apron with carrier rolls, and the center section is so designed that it is easily adjusted to handle various lengths of staple. The broad apron covers six or more spinning positions according to the gauge of the frame. This arrangement facilitates cleaning and allows the spinning of various staple lengths to a quality yarn.

Avisco's Textile Research Department plans to run the "Perfect" machine in comparison with drafting units supplied by American manufacturers and compare uniformity of twist from bobbin to bobbin with conventional methods. All interested mill men are invited to watch demonstrations of this and other frames at Marcus Hook.

RAYON 20 YEARS AGO

ROME, August 1932 – 2,000,000 rubles are being spent in Italy for rayon machinery by the Russian government.

NEW YORK, August 1932 – The popularity of open-mesh dresses has created a demand for rayon slips in deep costume colors.

NEW YORK, August 1932 – Perfumed rayon hosiery is being offered by manufacturers.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

World's largest producer of man-made fibers

RAYON ACETATE VINYON* FIBATEX

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

*FMC & CCC

How does U. S. Rubber make quills water-resistant?

Here's how: By making them of Uscolite, the remarkable new rubber-plastic compound. Quills made of this wonderful material not only are resistant to water, but they retain their shape throughout their entire service life. They last two to three times longer than wooden quills.

Not only that, but Uscolite quills do not chip or splinter, nor do they soften at the tip when run through conditioning agents. They have high-surface friction, which means excellent holding properties which eliminate or minimize sluffing of the yarn.

Like every other product in the complete line of United States Rubber Company's textile mill specialties—all the way from warp tubes to cop butts, Uscolite quills *last longer* and permit a *higher quality* of textile output. Write for more information today.

PRODUCT OF U.S.RUBBER SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Flat for maximum comfort

Locked for maximum wear

that's the "Flatlock" seam . . .

made only on the W & G "Flatlock" machine

Knit underwear seamed on the W&G "Flatlock" machine not only *looks* better — it feels better, wears better and *sells* better.

The "Flatlock" seam is *perfectly flat* — consisting of but a single thickness of the fabric, plus the thread. There are no uncomfortable ridges or humps — no bulky overlapped seams next to the skin.

The individual threads in the "Flatlock" seam are so interlaced that any of them may be cut without permitting the rest of the seam to rip or unravel when pulled in any direction.

The W&G "Flatlock" is the *only* machine which can produce this U. S. Standard Stitch Type 606. It is a high-speed, high-production machine that's designed and built to the highest standards of sewing perfection. Operators appreciate the ample working clearances, feed-off-the-arm principle, semi-automatic lubrication and ease of threading and operation.

"Flatlock" machines are now available for prompt delivery. Why wait longer?

For further details, ask for your free copy of our 8-page descriptive bulletin No. 902.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 39th St., New York 18, N.Y.

For decades, hosiery manufacturers have known
it's the DURA BEAU Finish that adds the vital
selling-touch to fine stockings—imparts that wonderful
filmy protection for added eye-appeal and buy-appeal.
That's why, in other fields of milady's wearables,
DURA BEAU is being "discovered" as the long-sought
ingredient for garments of better hand,
better appearance, better wearability.
Because it's "tailored to fit the fabric"
DURA BEAU means finishes that make textiles
more *DURA*ble, more *BEAU*tiful.

DuraBeau TEXTILE FINISHES

Reg. U.S.A. and CANADA

SCHOLLER LABORATORIES and practical field men are at your service everywhere, anytime to help you with your technical finishing problems. Write, wire or phone.

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulfonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa.
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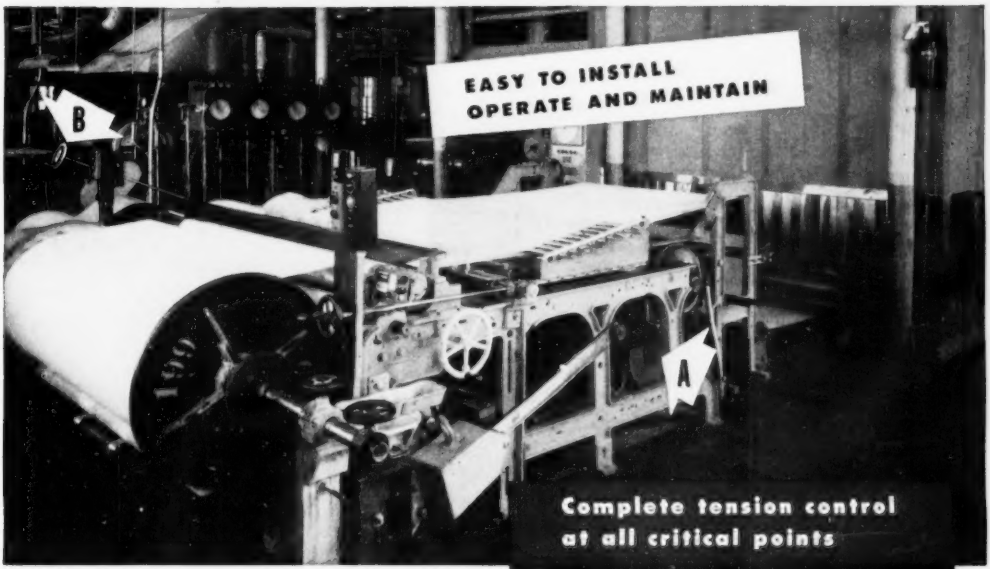
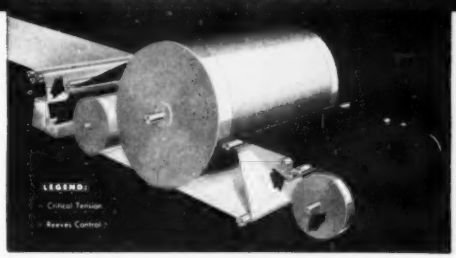
Build Better Beams with...
REEVES "Servo-Control" Slasher Drive



Arrow "A": The Complete Slasher Drive "nests" neatly beneath slasher head-end frame. *Arrow "B":* Handwheel—for setting Beam drive to maintain desired yard tension.



Add up all these quality-improving, money-saving advantages of REEVES "Servo-Control" Slasher Drive:

1 Finger-tip control from creep to run speeds by push button.

2 Smooth acceleration and deceleration through 15:1 speed range.

3 Quick, accurate, positive control of running speeds—without fluctuation—either manually or automatically tied in with moisture control.

4 Automatic, uniform tension regulation as beam builds.

5 Low initial cost; easily maintained by your mill mechanics; no complicated electrical hook-ups.

6 "Nests" under slasher head-end frame.

It will pay you to get the complete story right away. Send for bulletin No. T63c-S.

accurate · variable
REEVES *Speed Control*

REEVES PULLEY COMPANY • COLUMBUS, INDIANA
Recognized leader in the specialized field of speed control engineering

Famed *Garan* Finish now exclusive with L·O·F Fiber·Glass

Plastics reinforced with Garan Finished Fiber·Glass have outstanding flexural and compressive strength, superior weatherability and wet strength. Ideal for aircraft and a wide range of industrial applications.

L·O·F Garan Finish imparts outstanding properties to Fiber·Glass-reinforced plastics

Now, L·O·F has the exclusive rights to the famous Garan Finish. Widely used on the west coast in industrial fabrics, it is now available on a nation-wide basis for greatly improved reinforced plastics.

The L·O·F Garan Finish imparts properties of higher flexural and compressive strength and increases the translucency of Fiber·Glass-reinforced plastics. What's more, there is little loss in these properties after such plastics are exposed to high humidities or immersed in water.

Laminates made with L·O·F Garan Finished Fiber·Glass retain virtually all their wet strength after prolonged exposure. Losses in flexural strength of less than 10% have been shown. And moisture absorption after 24 hours' immersion has been less than 0.1%.

For more information on how L·O·F Garan Finished Fiber·Glass can give superior reinforced plastics, contact the nearest L·O·F office (district offices in 24 major cities). Or write, wire or phone Libbey·Owens·Ford, Dept. F·G 1882, Nicholas Bldg., Toledo 3, Ohio.

L·O·F GLASS PLASKON FIBER·GLASS

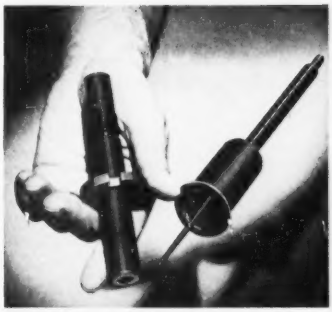
LIBBEY·OWENS·FORD GLASS COMPANY
FIBER·GLASS DIVISION

Both polyester resins and Fiber·Glass for reinforced plastics available through Plaskon Division District Offices

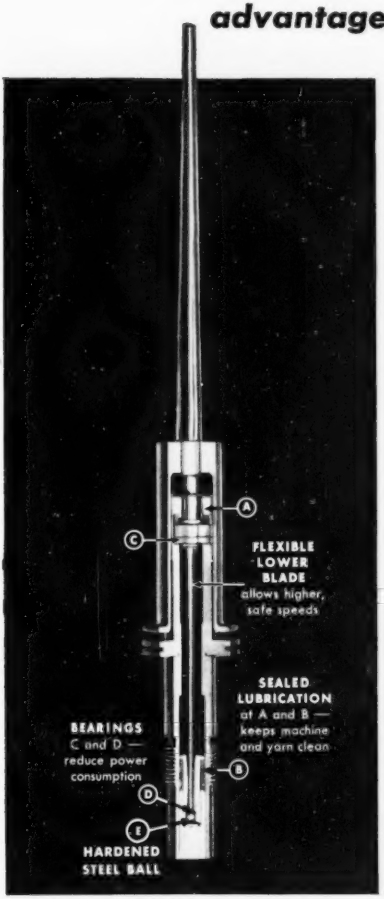
FIBER·GLASS

Now you can be sure of CLEANER YARN...

one of many advantages of this new uptwister spindle



UNIFLEX SPINDLES have no free oil. Therefore no oil spray can soil your yarn. Proof is shown by absence of oil drip when fully lubricated step is held upside down. Sealed felt pads, lubricated by injection only once a year, meter oil to the bearings through porous bronze bushings.



FLEXIBLE LOWER BLADE cuts down vibration . . . reduces bearing loads . . . lengthens spindle life . . . lowers power consumption. Uniflex Roller Bearing Spindles are standard equipment on all new Unirail Uptwisters.

Reduce your costs, too, with NEW UNIFLEX SPINDLES on your uptwisters

Lower Power Costs. Because the Uniflex lower blade reduces bearing loads. Also, both upper and lower bearings are especially designed to cut power requirements, while a hardened steel ball takes the entire thrust load on a small area of contact . . . another power saving feature. Field tests to date indicate power savings of more than 15% over plain bearing spindles.

Lower Maintenance Costs. Because the Uniflex Spindle greatly reduces oiling and cleaning cycles and other attention. Less vibration means less heat and wear, for longer, trouble-free service life. Uniflex Roller Bearing Spindles not only assure a cleaner product but more economical production.

WRITE FOR BULLETIN S1. Get all the information about how Uniflex Spindles make uptwisters produce more and better yarn at lower costs.

UNIVERSAL WINDING COMPANY

P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

23.2.4

Yours for the asking...

A New Manual of Information Every Textiles Executive Will Want

This unique 60-page manual, compiled by Burroughs for the textiles industry, contains information covering practically every phase of the business of textiles. It points the way to better and more profitable accounting methods for yarn and cloth mills and for garment factories. It is also a valuable training and reference book that will find many uses in the entire textiles industry.

"Textiles Accounting" is divided into two sections. The first gives you a simplified explanation of the industry, its organization and functions—from the manufacture of yarn and cloth, bleaching, dyeing and finishing—to the manufacture of garments and cloth products and their distribution. The second part contains an unprecedented summary of the modern accounting methods that textile firms are now using together with flow charts and detailed forms.

"Textiles Accounting" is yours for the asking. Call or write your nearest Burroughs office, listed in the yellow pages of your telephone book, or mail the coupon.

BURROUGHS ADDING MACHINE COMPANY,
DETROIT 32, MICHIGAN

I would like to have a copy of your book, "Textiles Accounting."

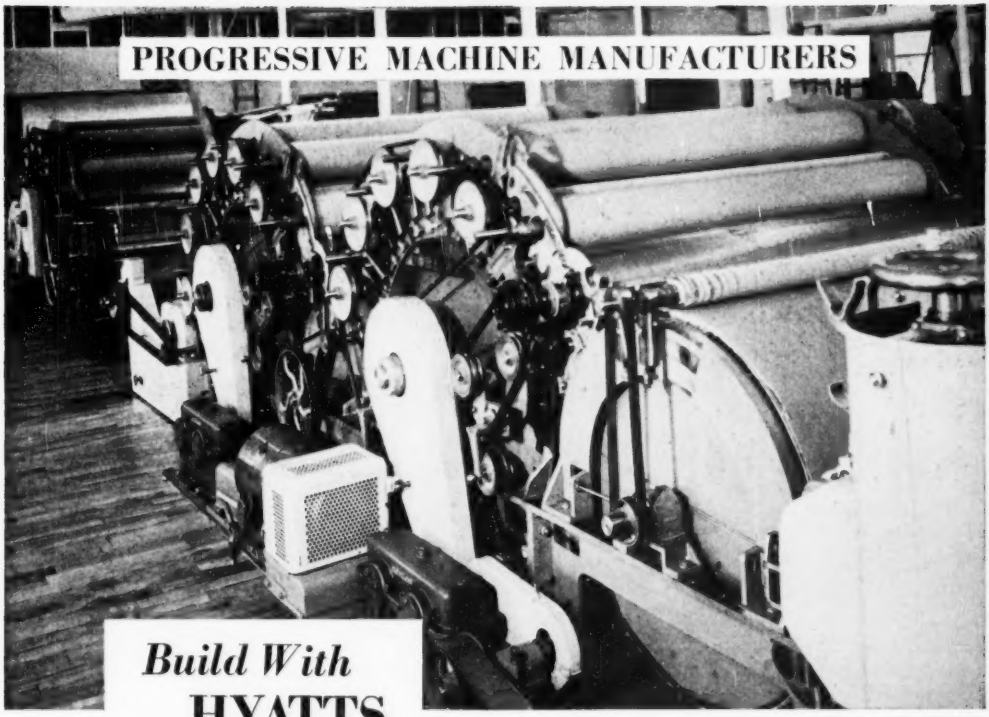
Name _____

Company _____ Title _____

Address _____ City _____ Zone _____ State _____

WHEREVER THERE'S BUSINESS THERE'S

Burroughs



Build With HYATTS

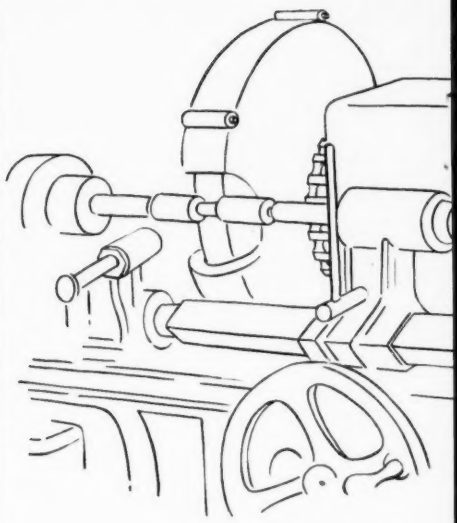
The Davis & Furber Machine Company has found that Hyatt-equipped machines last longer, produce more and better sliver and yarn. Cost of lubrication has been drastically reduced because very little is required at infrequent intervals. Sealed housings keep grease in the bearings, dust and dirt out.

Like all other Davis & Furber wool preparatory machines, the Model "L" Woolen Card is equipped with Hyatt Roller Bearings including the worker and stripper rolls. Because this card and its condenser are equipped with almost 200 Hyatt Roller Bearings they start up smoother, operate easier with less power consumption, and require no bearing "break-in" period.

Progressive builders of textile machines choose Hyatts for dependable bearing performance. Be sure that Hyatt Roller Bearings are in your equipment. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

To get the most out of your ROLL SHOP EQUIPMENT



Call your Armstrong man— he can help

YEARS OF EXPERIENCE have taught Armstrong men the answers to many textile problems. Could you use some help on a roll covering problem? Call your Armstrong man—anytime.

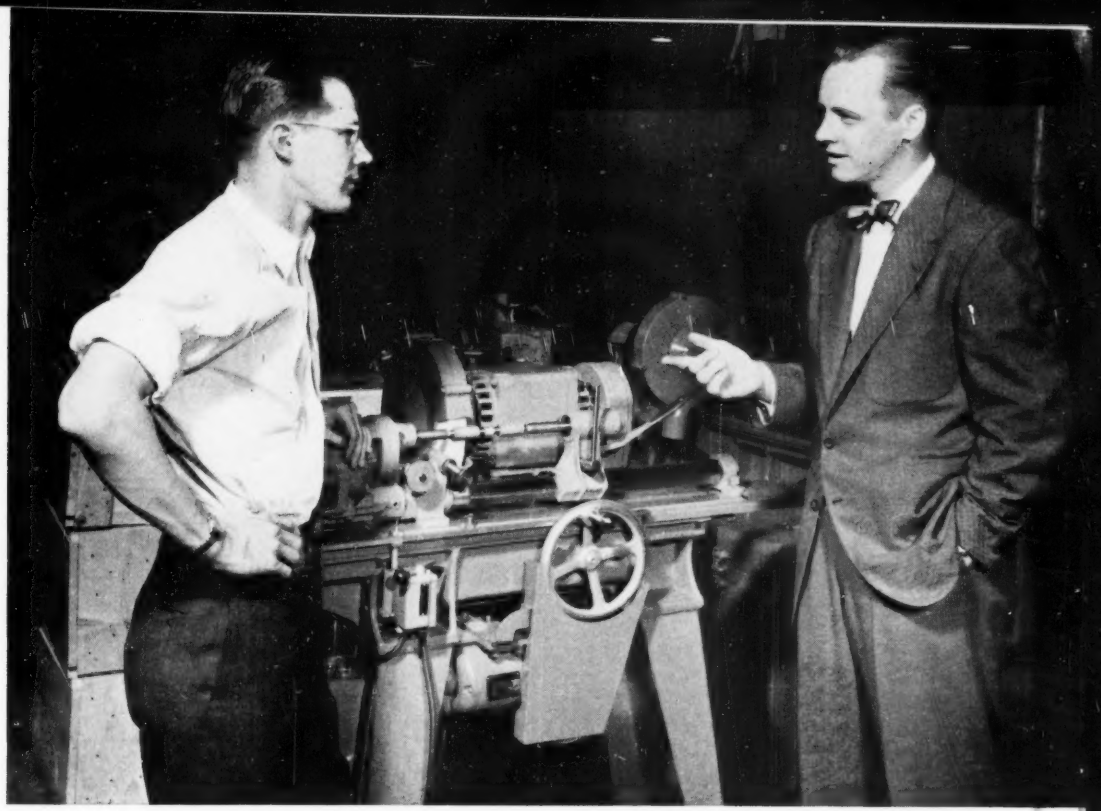
Can you put too high a value on a roll shop that does a consistent, top-notch job? Probably not. For example, a batch of roll covers buffed slightly out of parallel can play hob with your production, as you well know.

That's why you'll find your Armstrong man out in your roll shop on practically every visit he makes. He's there to head off trouble—if he can—before it starts, to give your roll coverers a hand if they happen to need it.

Of course, he can't take your buffing machine apart and reassemble it blindfolded. But he does know most of the quick tricks on its proper use and adjustment.

Another thing your Armstrong man can do, is help you set up a practical rebuffing schedule, one that's geared to your particular operation. His purpose here, of course, is to insure consistent top performance of your Armstrong roll coverings and at the same time to help you avoid excessive buffing that cuts cover life.

ARMSTRONG'S



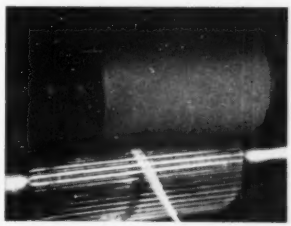
your roll coverer head off trouble

Naturally, you needn't limit your Armstrong representative to roll shop problems. He's equally ready to go over any other roll covering problems, for instance, when you plan a change in your equipment or type of work. And if you should run into roll covering trouble, a telephone call usually will bring him to your mill within 24 hours.

Giving you the right roll covering for the work you're running will be no particular problem. There's an Armstrong's Accotex Cot for every kind of service. They're available in either plain synthetic rubber or in combinations of cork and rubber, each in various amounts of cushion and all with the added "electrolyte" that means maximum lap resistance.

Many mill men call an Armstrong man whenever they think of roll coverings. If you're one who doesn't, perhaps you should start today. Write or call Armstrong Cork Company, Textile Products Dept., 3608 Arch Street, Lancaster, Penna. Available for export.

THIS COT LAPS: Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have the effect of adhering fibers to cot, causing them to lap up.

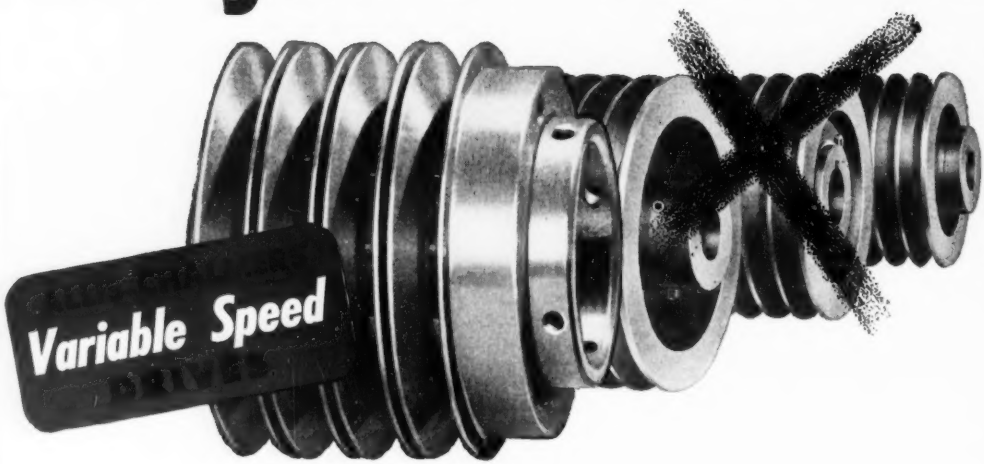


THIS COT RESISTS LAPPING: Certain electrolytes put in patented Accotex® Covers neutralize electric charges in moisture layer on cot. This cancels out the basic attraction of fiber to cot.

ACCOTEX COTS

A FULL LINE of long-lasting, lap-resistant Armstrong's Cots are available. Whether you spin cotton, wool, synthetics, or blends, your Armstrong man has an Accotex Cover that's right for the job.

Let one sheave do the job of 2 or 3!



WHY DISMANTLE DRIVES and change sheaves every time you want to change machine speed? In fact, why have extra sheaves lying around cluttering up the shop? Just one *Vari-Pitch* sheave will give you hundreds of speed variations. Don't be satisfied with "nearly" the right speed when you can get the "exact" speed you need so easily.

In addition:
- ✓ *Vari-Pitch* drives are quiet.
- ✓ Machine speed will not change once it is set.
- ✓ *Vari-Pitch* drives cost less than other methods of speed changing, such as multi-speed motors, or special control.

MAKE A-C YOUR V-BELT DRIVE HEADQUARTERS

Allis-Chalmers offers these services:

1. A wide choice of variable speed sheaves.
2. Help to the equipment manufacturer in engineering the drive.
3. On-the-spot help for the contractor.
4. All the equipment and engineering needed for the complete drive including: sheaves, belts, motors, starters, and motor bases—all from one reliable source, backed by nation-wide service.

Call your nearby Allis-Chalmers distributor or district office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-3801

Vari-Pitch is an Allis-Chalmers trademark.

Sold . . .
Applied . . .
Serviced . . .

by Allis-Chalmers Authorized Distributors, Certified Service Shops and Sales Offices throughout the country.

MOTORS — ½ to 25,000 hp and up. All types.

CONTROL — Manual, magnetic and combination starters; push button stations and components for complete control systems.

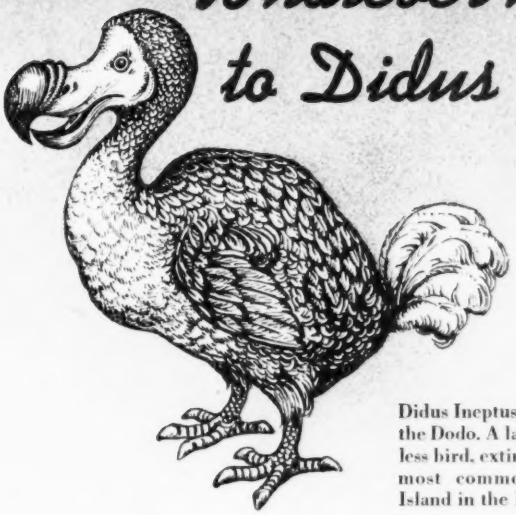
PUMPS — Integral motor and coupled types from ¾ in. to 72 in. discharge and up.

ALLIS-CHALMERS

Originators of the Multiple V-belt Drive for Industry

Texrope and *Vari-Pitch* are Allis-Chalmers trademarks.

Whatever happened to Didus Ineptus?

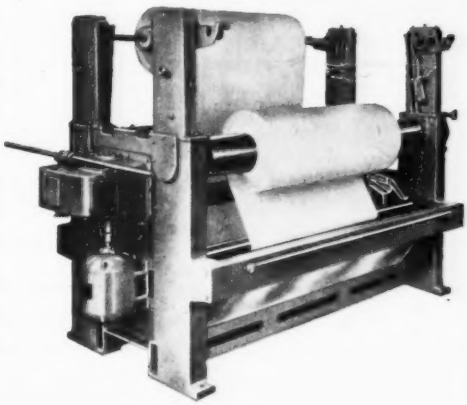


Didus Ineptus. Commonly called the Dodo. A large, clumsy, flightless bird, extinct since 1681. Was most common on Mauritius Island in the Indian Ocean.

The ornithologists tell us that the dodo has been extinct for over 250 years, but don't you believe it. He is very much with us even today.

Almost every processing plant has obsolete machines—sad old birds that hatch nothing but losses.

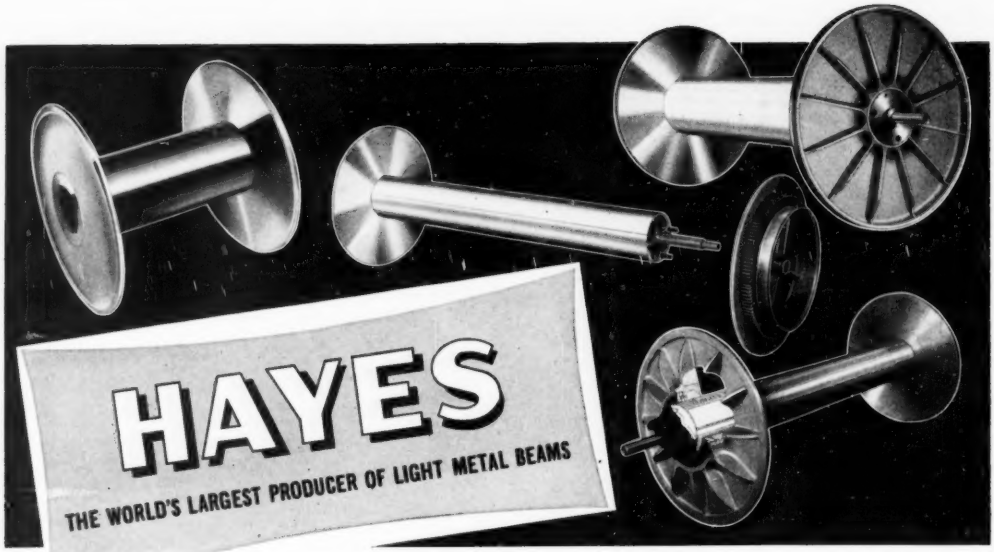
Perhaps some of your *jigs* have outlived their usefulness. Why not retire these dodos to a museum and replace them with modern Van Vlaanderen 888 Jigs, designed for the future?



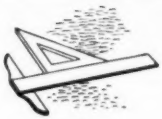
The 888 has created a new standard of jig performance. Its massive construction and precision engineering enable it to deliver better quality dyeing at lower cost per yard.

This is a good time to study your dye room critically. Why not ask our engineers to help you?

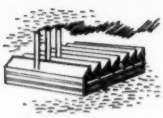
VAN VLAANDEREN



offers you . . .



SKILLED DESIGNING TALENT



MODERN PRODUCTION FACILITIES

PRACTICAL FABRICATING EXPERIENCE

For many years Hayes Industries has manufactured light weight metal parts for the aircraft industry where advanced manufacturing techniques and exacting precision standards must be maintained. Long experience in fabricating aluminum and magnesium parts has been instrumental in helping to produce textile beams that are light in weight, true running and perfectly balanced. Hayes Light Metal Beams have combined correct design and advanced manufacturing techniques to give you working surfaces that are machined to precise limits permitting sustained production. These working surfaces are perfectly smooth, splinter free and rust proof, requiring practically no maintenance, producing better selvages and reducing rejects to a minimum. Hayes Beams can be taken apart for replacement of damaged parts. Through long and intimate association with the textile industry, Hayes has developed a skilled engineering staff whose services are available to help solve your individual problems.

HAYES MODERN PLANT FACILITIES PRODUCE

Light Metal Loom Beams
Light Metal Adjustable Loom Beams
Light Metal Section Beams
Light Metal Tricot Beams
Light Metal Replacement Loom Beam Barrels

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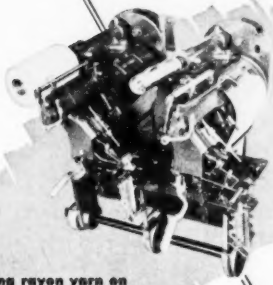
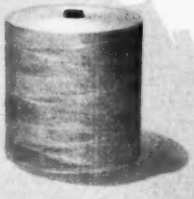
Greensboro, N. C.

FOSTER MODEL 75 - *A Versatile Precision Winder*

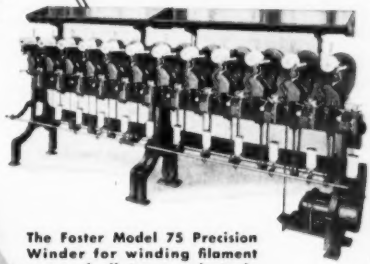
Can YOU use it for one or more of these purposes?



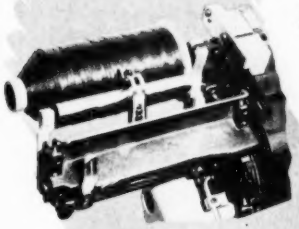
6 inch parallel tube of cotton yarn produced on Model 75.



Winding rayon yarn on 1¾" dia. dye tubes by means of special holder and pressure roll assembly, which makes possible very soft packages. (No. 5 durometer reading)



Straight edge cone of filament yarn wound on Model 75. Weights up to 12 lbs. with some types of yarn, such as rayon tire cord yarn.



The Foster Model 75 Precision Winder for winding filament yarns of all types and staple yarns.

Winding King Spool by means of special attachment which utilizes time saving combination pressure roll and guide.

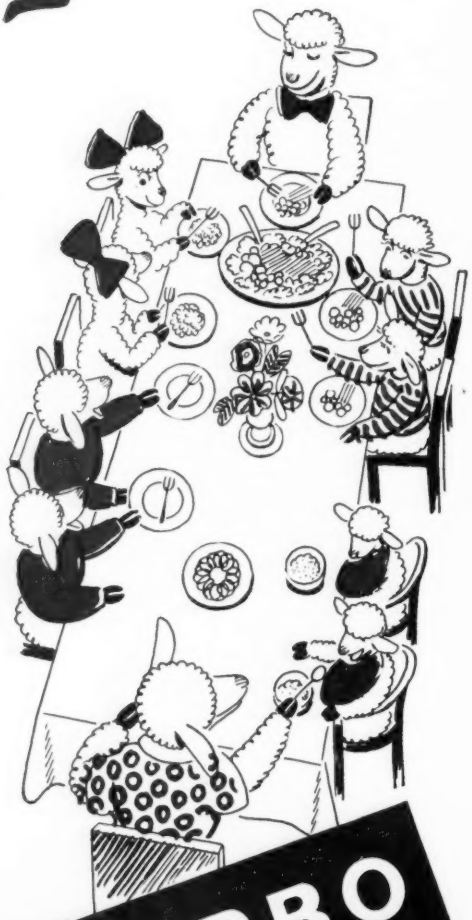
Pineapple cone of filament yarn produced with special attachment. Preferred for Nylon yarn.

FOSTER MACHINE CO.

WESTFIELD, MASS., U. S. A.

Southern office, Johnston Bldg., Charlotte, N. C.—Canadian Representative, Ross Whitehead & Co. Ltd., 1475 Mountain St., Montreal, Que.—European Representative, Muschamp Taylor, Ltd., Ashton-Under-Lyne, England.

Let's talk RESULTS



Here is the machine that has set the industry talking. It preboards with steam or boards with heated air. Production is 120 to 130 dozen pairs of static-free stockings per 8-hour day . . . with *one* operator.

That's the Turbo AD 48.

Automatic timing takes the guesswork out of hosiery finishing. Form movement in and out of the chamber can be automatic or not, depending on the production rhythm of the operator.

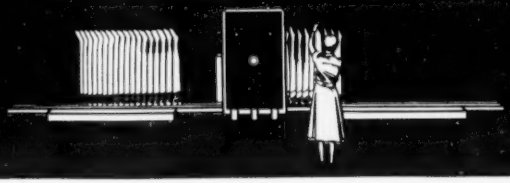
48 forms, in two groups, glide in and out of the finishing chamber smoothly, evenly, as gently as a lamb. Precious stockings are treated with the fine care they deserve. Leg forms stay upright — fabric won't creep. They stop at an angle calculated for maximum ease in inspection, dressing and stripping. There is ample space between stopped forms for speedy handling. You can run two sizes at one time, forms are quickly and easily changed.

Precision engineered to the last detail, backed by actual production records in the industry, a Turbo AD 48 represents a sound investment toward hosiery quality.

Write today for the complete Turbo story on boarding and preboarding equipment. See it in action, there is probably a Turbo Machine in your area now.

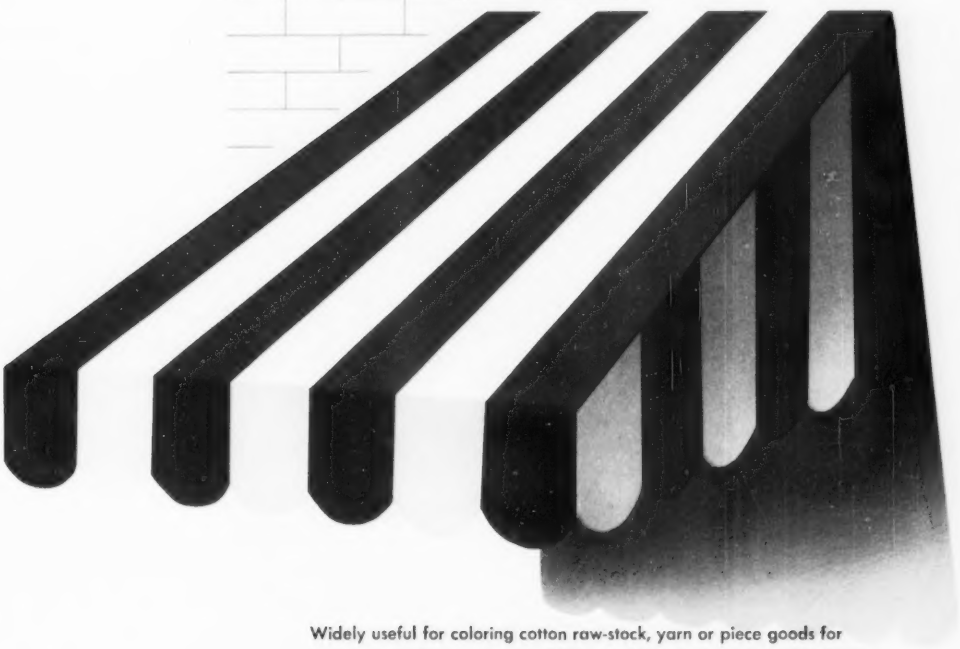
TURBO MACHINE COMPANY
Lansdale, Pennsylvania, U.S.A.
Southern Rep.: F. W. Warrington Co., Charlotte, N. C.

TURBO
"Gentle as a Lamb"



Shade with a place in the sun...

NATIONAL CARBANTHRENE RED BROWN 5R PASTE



Widely useful for coloring cotton raw-stock, yarn or piece goods for better-grade dress or shirting fabrics, embroidery yarns, thread, drapery and upholstery fabrics and awning duck, this National anthraquinone vat dye has exceptional fastness to most color-destroying agencies.

It is rated "excellent" in fastness to washing, perspiration, water spotting, sea water, boiling soap, stoving, chlorine, peroxide and cross dyeing; "very good" to rubbing, mercerizing, boiling soda ash and light.

Get in touch with the nearest National Aniline office for technical and application data and a working sample of this addition to National's fast growing line of vat dyes. And always remember—we welcome the opportunity to provide technical service on difficult matches and to serve your everyday dyestuffs needs promptly from nearby stocks.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

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Sheets, Pillow Cases, Bolts of Fabrics, Curtains, Underwear, Shirts, Towels, Handkerchiefs, Hosiery, Batting, Yarn

The Hayssen Textile Wrapping Machine handles heat-sealing cellophane, pliofilm and polyethylene. It overwraps cartons, trays, flat cards and u-boards . . . handles the most delicate fabrics and fluffy material like cotton and wool bats. Special attachments (electric eye, roll-type top labeler and printer, card or u-board feeder) are available.

Over 42 years' experience gives Hayssen machines unmatched performance, low first cost, overall economy of operation and maintenance. Many Hayssen units are in use today that were purchased over 20 years ago.

WRITE for folder on Hayssen Textile Wrapping Machines. Tell us your wrapping problems —we have the answer.

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Hayssen MFG. COMPANY

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Since 1910, One of the World's Largest Manufacturers of Wrapping Machines

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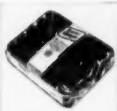
MEATS

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New, Long-Loop Terry Knit With Automatic 4-Color Stripes!

Supreme's Most Terrific Multi-Fabric Sales-Knitter!

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Variable Striped or Solid Terrys — Light or Heavy Weight — PLUS — The Entire Range Of Model SA Jersey and Automatic Stripes!

Knits Wide Range Of Yarn Sizes For Weights Varying From Heavy Bathrobe Terry To Light Polo Shirt Fabric!

Easily Convertible, On The Job, Into Any Machine In Supreme's Famous Striper Line. Produce The Entire Supreme range of patterned, striped or pattern-placed cloth!

Up To 20 Yds. Per Hour Striped Terry. Up To 30 Yds. Per Hour Single Color Terry. As An Automatic Jersey Striper—Up To 40.5 Yds. Per Hour Plain Jersey and Up To 25 Yds. Per Hour Automatic Stripes.

Pinch yourself and then write for the complete story and sample swatches.

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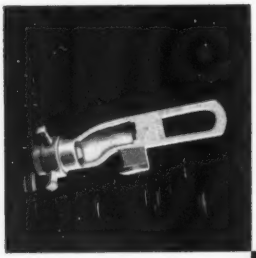
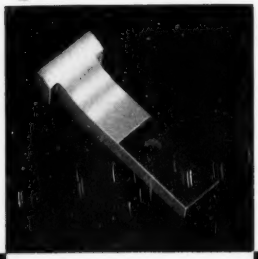
How's YOUR supply of Loom Parts?



BTM PARALLEL for E-model looms made of finest quality cast iron. Machine finished for better service and longer wear.

BTM PART No. 3349

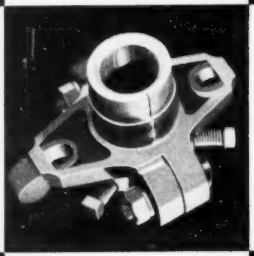


BTM PARALLEL TONGUE, hardened and ground for smooth, trouble-free action and longer wear.

BTM PART No. 63695

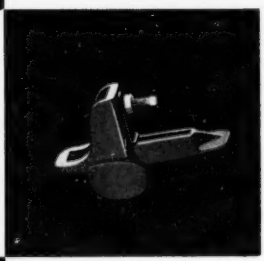
BTM PICK CAM HUB. Malleable iron bored with shims for clamp fit. Split to allow easy installation.

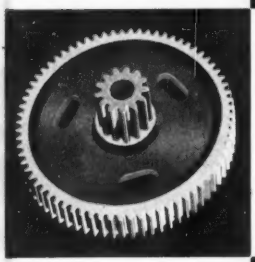
BTM PART No. 59591-2



BTM PARALLEL SHOES. These shoes have lips that provide true alignment and parallel.

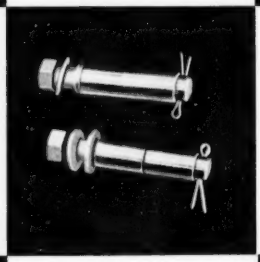
BTM PART No. 66104





BTM CHANGE GEARS. Precision cut teeth give smoother pick motion and much longer service.

BTM PART No. 26118-80



CHANGE GEAR STUD with brass bushing.

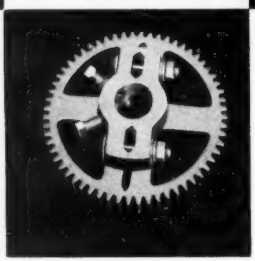
BTM PART No. 1955-S

CHANGE GEAR STUD with 76790 brass bushing.

BTM PART No. 76789

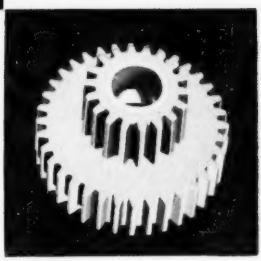
BTM HARNESS CHANGE GEAR. Has special split feature for fast and easy installation.

BTM PART No 5642



BTM REDUCING GEAR. Has brass bushing for maximum service. Alemite fitting.

BTM PART No. 26201-XG



Check your needs THESE BAHAN PARTS GIVE *longer service!*

Many production hours can be saved by keeping an adequate supply of critical loom parts on hand at all times. Inventory your supplies now and fill in with genuine Bahan Parts.

BAHAN TEXTILE MACHINERY CO., Inc.

DESIGNERS AND MANUFACTURERS OF RELIABLE TEXTILE MACHINERY FOR OVER 30 YEARS

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HUNDREDS of NEW, PROFITABLE PRODUCTS from WEBS

RANDO-FEEDER and RANDO-WEBBER Non-oriented WEBS have

- Greater Strength
- Better Resilience . . . Springier
- Better Resistance to Delamination or Splitting
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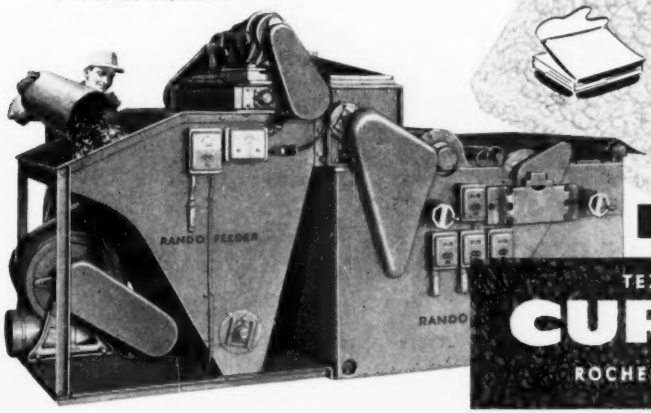
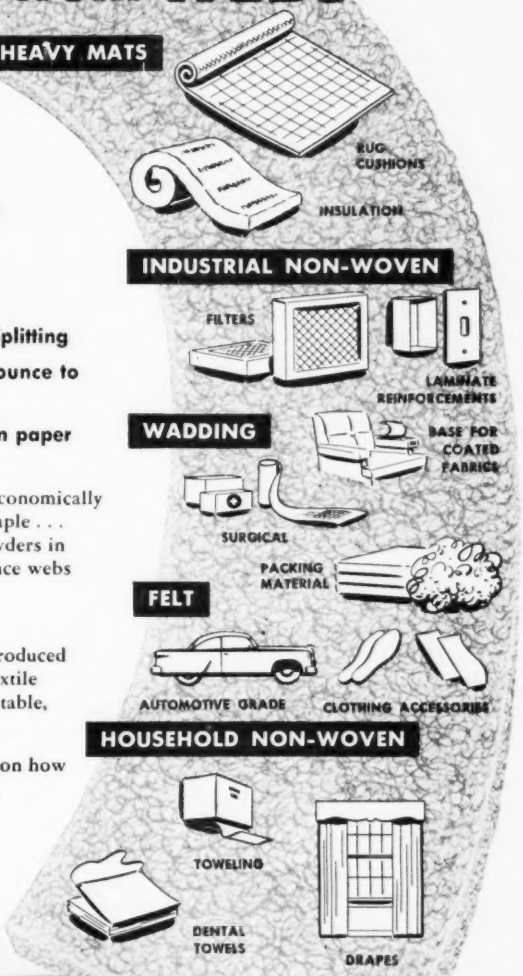
Only a Rando-Feeder and Rando-Webber can economically blend practically any type of fiber—waste or staple . . . can introduce granular materials and resin powders in combination with fiber materials . . . can produce webs from many materials that cannot be handled successfully on other equipment.

LOOK It will pay you to see and test webs produced by Rando-Feeder and Rando-Webber . . . the textile machine that will process 'most any fiber (vegetable, animal or synthetic) alone or in combination.

WRITE today for more detailed information on how you can have a web made from your own fiber. Curlator Corp.. 580 Blossom Road, Rochester 10, N. Y.





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TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK

Now, it's a case of better fabrics . . . faster. Standard's quality products and technical know-how can help you meet government standard specifications. Here's a list of Standard product uses from carding right on through to finishing.

For faster, better carding of cottons, rayons and synthetics, use Standapol and Stantex products.

For faster and better desizing, use Stantex Penetrator 40.

Improve your sulphuric acid sour by using Stantex Penetrator 40.

Use Turpenol XXC in kier boiling, continuous boiling, and jig boiling to save time, improve quality and lower costs.

In Rodney Hunt slack soapers . . . use Pyrotex, a detergent that cleans in any kind of water at any temperature.

Mercerize with Mercetex 756 at any concentration up to 60° Twaddle for perfect lubrication and penetration. Mercetex 756 stores well in reclaimed Caustic and the wetting speed is just right.

Dyebath . . . Vats, Sulphurs or Directs, use Penetrator 111 and Sanforol 50D. Stop your scum and dye spots, and get good penetration.

For dispersing, retarding and leveling light and dark shades on difficult government fabrics, use Retardine and Retardine D.

Clean up your dyed goods by using Pyrotex, Stantex NR-2, and Standapon. Excellent detergency, stability at boil, stability in acids or alkalis, and stability in soft or hard water. Easily rinsible. Economical to use.

Finishing and Sanforizing . . . Standapol 16 and Sanforol 50. They give the correct hand and softness, have excellent sewing characteristics, and they will not injure the most delicate skin.

Write today for complete details on the process and Standard product in which you are interested.

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UNRIVALED for durability

HYDRO-PRUF

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WATER REPELLENT FINISH

Puts the magic of silicones to work for the textile industry

Besides achieving *truly durable* water repellency, here's what else HYDRO-PRUF does to add extra value to fabrics, make them easier to sell—

- *improves wear resistance*
- *adds crisp, resilient finish*
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- *resists water borne stains*
- *does not affect light fastness of dyes*
- *improves wrinkle and crease resistance*
- *imparts worsted hand to synthetics*
- *repels water without retarding air circulation*

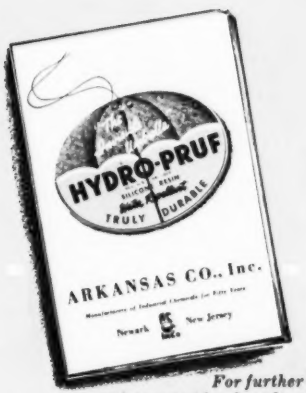
NOTE TO FINISHERS—You can count on HYDRO-PRUF for:

APPLICATION EASE—
readily miscible in cold water, applies equally well from hot or cold solution

FULL COMPATIBILITY—
can be used with all urea and melamine resins and many non-curing resins

GREATER ECONOMY—
eliminates need for neutralizing and washing, except when resins of curing type are used; ease and efficiency of application mean less handling, less cleaning of equipment

FABRIC VERSATILITY—
can be used with excellent results on most fabrics—including acetate, viscose (both spun and filament), cotton...wool...silk... nylon and other synthetics



For further information on its properties, benefits and application, write for your copy of the HYDRO-PRUF booklet, or for mill demonstration.

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Serving the Textile Industry for 49 Years

NEWARK, NEW JERSEY

Chlorine is Tamer with these CRANE Valves

. . . Designed to handle water-free chlorine, gas or liquid, up to 300°F.

Your best valves for handling chlorine are those made expressly for this service. It's too tough for ordinary equipment.

Rugged Construction

You'll operate more safely, efficiently, and dependably with these Crane Chlorine Valves. Their rugged forged steel construction gives you protection against internal and external shock. You'll have freedom from bonnet joint leakage with their strong Crane bolted design.

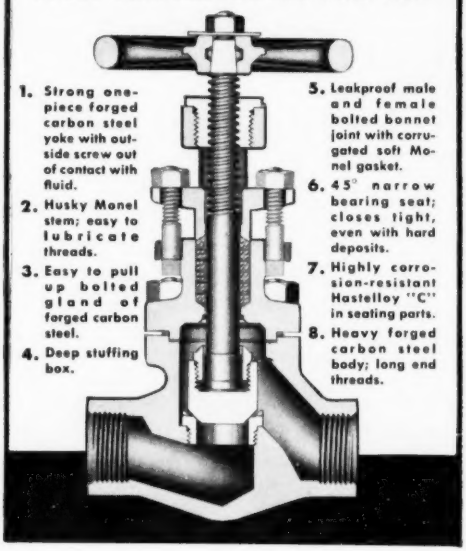
Effective Corrosion Resistance

You'll be equipped for highest resistance to corrosion with the Hastelloy "C" disc and seat rings, and the Monel stem. A corrugated soft Monel gasket prevents corrosion and leakage at the bonnet joint.

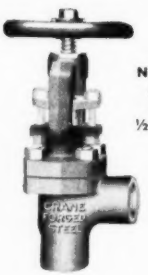
Literature Free on Request

The many refinements of Crane Chlorine Valves assure not only more efficient chlorine control, but important savings on valve maintenance and replacement costs. Get the complete facts in Circular AD-1608. Write or ask your Crane Representative for a copy.

EVERY FEATURE WORKS FOR YOU

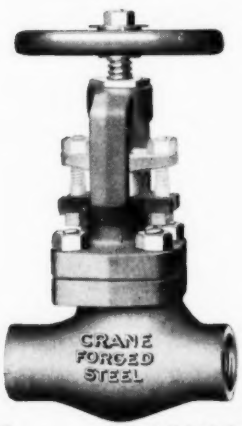


1. Strong one-piece forged carbon steel yoke with outside screw out of contact with fluid.
2. Husky Monel stem; easy to lubricate threads.
3. Easy to pull up bolted gland of forged carbon steel.
4. Deep stuffing box.
5. Leakproof male and female bolted bonnet joint with corrugated soft Monel gasket.
6. 45° narrow bearing seat; closes tight, even with hard deposits.
7. Highly corrosion-resistant Hastelloy "C" in seating parts.
8. Heavy forged carbon steel body; long end threads.



No. 1645 Angle Sizes ½ to 2 in.

No. 1644 Globe Sizes ½ to 2 in.



The Complete Crane Line Meets All Valve Needs. That's Why

More Crane Valves Are Used Than Any Other Make!

CRANE VALVES

CRANE CO., *General Offices:* 836 S. Michigan Ave., Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

TEXTILE BANKING COMPANY

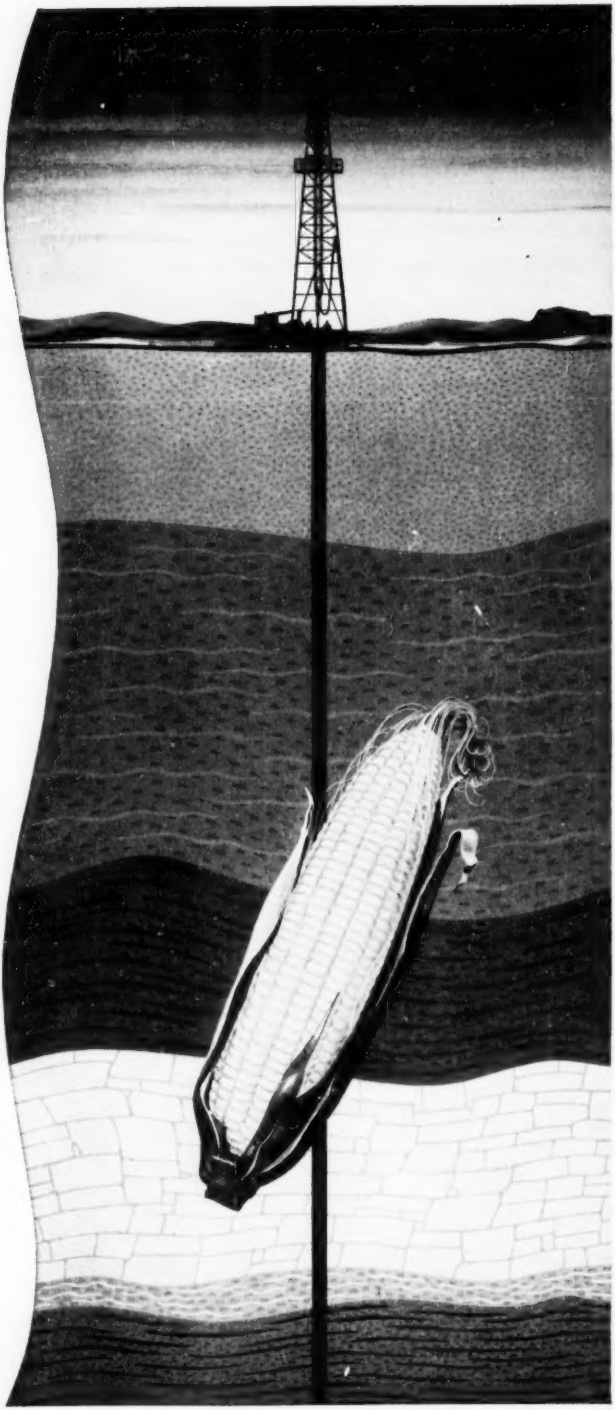
Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

What's corn doing "deep in the heart of Texas"?



Research discovered that drilling for oil could be expedited by the use of a binding agent made of a product of corn. This firmed up the side walls . . . also aided in the early flow of sludge. "Black gold" speeded by yellow corn! This is but one of the numerous examples of how continuous basic research in corn helps American industry . . . helps you.

Corn products in textiles

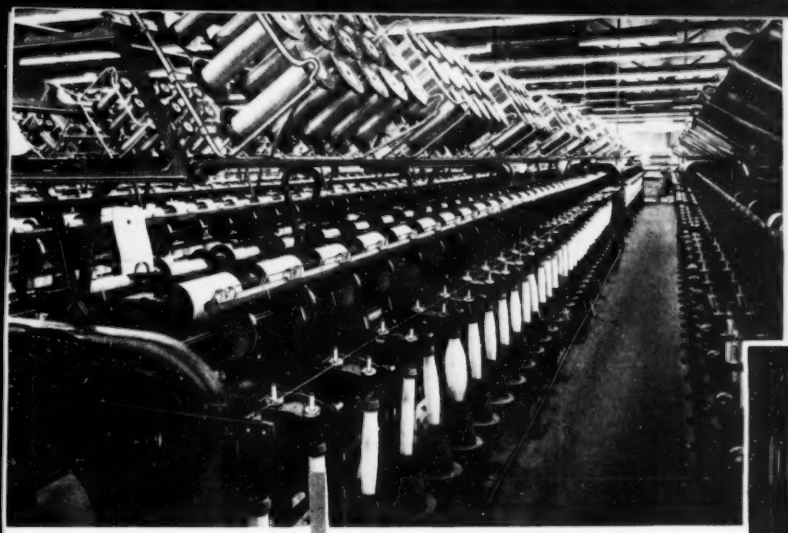
In the textile field new starches, gums and dextrins provide superior formula ingredients for many textile processes. New techniques involving the use of corn products are being developed as part of a continuing research program at Corn Products Refining Company.

If you have a production problem why not check with Corn Products? A complete line of corn products for every purpose is available. Technical service is yours . . . no obligation, of course.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

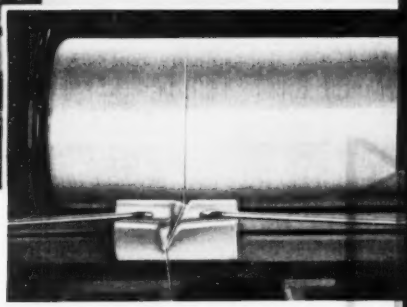
Manufacturers of

GLOBE brand dextrines, gums | **GLOBE brand starch** | **EAGLE brand corn starch**



Maintains a CONSTANT Yarn Tension During Entire Traverse, INCLUDING THE REVERSING POINTS

This eliminates the build-up of excess yarn on package ends.



AlSiMag Number GE-26221

ALSIMAG®

presents a *NEW IMPROVED* Winder Redraw and Uptwister Guide

Will fit many type machines but has been designed principally for Universal's Atwood Redraw Model No. 200 and Atwood Utility Uptwister.

PRICES REDUCED, TOO! *A NEW IMPROVED METHOD OF PRODUCING THESE GUIDES PLUS VOLUME DEMAND FOR THEM HAS PERMITTED PRICE REDUCTIONS AS MUCH AS 35%.*

FULL FRAME TESTS ADVISED. As a result of the angled slot, the traverse required is somewhat shorter than for conventional guides. Therefore, the length of traverse must be adjusted for these AlSiMag guides. This is easily and quickly done. Thus we advise tests on a full frame. To make this easy for you we will consign to you, guides for a full frame. They may be returned for full credit at any time within one year. This permits you to give them full tests without cost.

50TH YEAR *OF CERAMIC LEADERSHIP*

AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENNESSEE

OFFICES: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 • PHILADELPHIA, 1649 North Broad St., Stevenson 4-2823 SOUTHWEST: John A. Green Co., 6815 Oriole Drive, Dallas 9, Dixon 9918 • NEW ENGLAND, 1374 Massachusetts Ave., Cambridge, Mass., Kirkland 7-4498 LOS ANGELES, 5603 North Huntington Drive, Capitol 1-9114 • CHICAGO, 228 North LaSalle St., Central 6-1721 • ST. LOUIS, 1123 Washington Ave., Garfield 4959

How To Stop "Giving Away" Your Stockings

Stockings are still the loveliest gift. But, you won't give yours away if you change to the Filaseal System — for better dulling, increased snag and pull resistance, lovelier finish.

In the Filaseal System you get four finishes that are *made for each other* — a resin finish, a dulling agent, an exhausting agent, a wax lubricant. They are all applied in one bath after the dye is dropped.

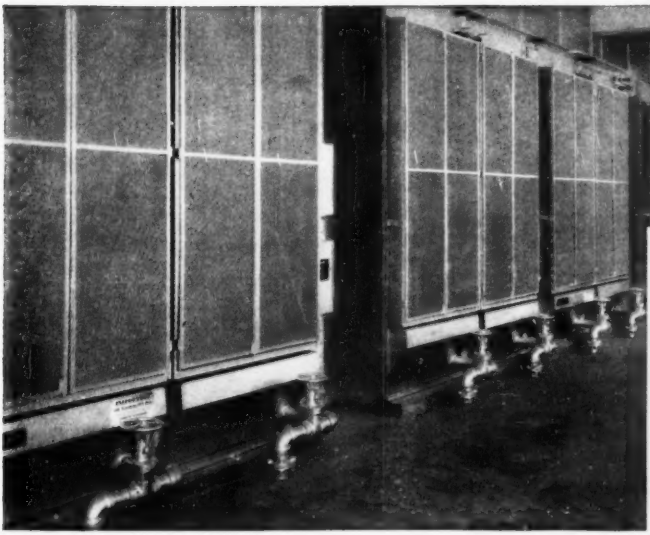
Amalgamated Chemists are ready to develop the proper Filaseal System for your requirements. Without obligation, we will send a Representative into any mill located near either of our headquarters with enough Filaseal to finish 50 dozen or more stockings. Or, we will finish sample lots of hosiery sent us in the greige.

We also offer a complete line of Fabric Finishes, Dyeing Assistants and Scouring Agents. Our Field Representatives, experienced textile chemists, will help you with any textile chemical problem. Our research and production laboratories are at your service. Write or call us today.

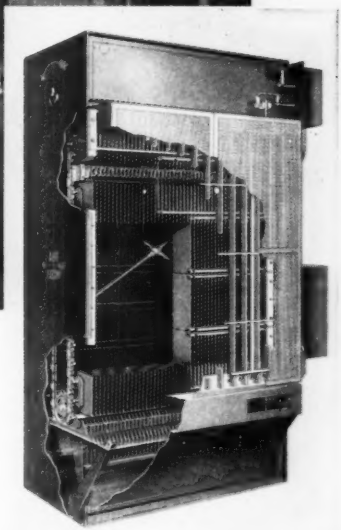
AMALGAMATED CHEMICAL CORP., Phila. 34, Pa.
Southern Division: 1819 Spring Garden Street, Greensboro, N. C.

Amalgamated

where clean air is essential



One of many types of American Air Filter equipment suitable for textile mill service, the ELECTRO-MATIC precipitator features fully automatic, self-cleaning operation.



Cutaway of Model E ELECTRO-MATIC.

AAF *Electro*-MATICS cut operating costs... improve quality control

Fully Automatic Precipitator Eliminates Costly Shut-downs

Conditioned air is essential in textile manufacturing—especially for thread drying, yarn dyeing and other critical processes where temperature and moisture-content must be exact.

In over 100 textile mills throughout the country, AAF ELECTRO-MATICS are providing super-clean air for the central air conditioning systems which service these important phases of production. Self-cleaning, the ELECTRO-MATIC assures a constant flow of dust-free air in these systems at all times.

This modern, fully-automatic, electronic precipitator offers highest cleaning efficiency over a wide range of particle sizes—from smoke to large air-borne material. And because of this high degree of efficiency, rigid product quality control is possible.

Reduced maintenance man-hours, improved employee efficiency, no unnecessary shut-downs—these are some of the benefits AAF ELECTRO-MATICS assure . . . benefits which contribute to lower over-all operating costs.

If you want further information on this modern precipitator—or information on other AAF equipment—contact your nearest AAF representative . . . or write American Air Filter Company, Inc., 275 Central Avenue, Louisville 8, Kentucky.

American Air Filter
COMPANY, INC.

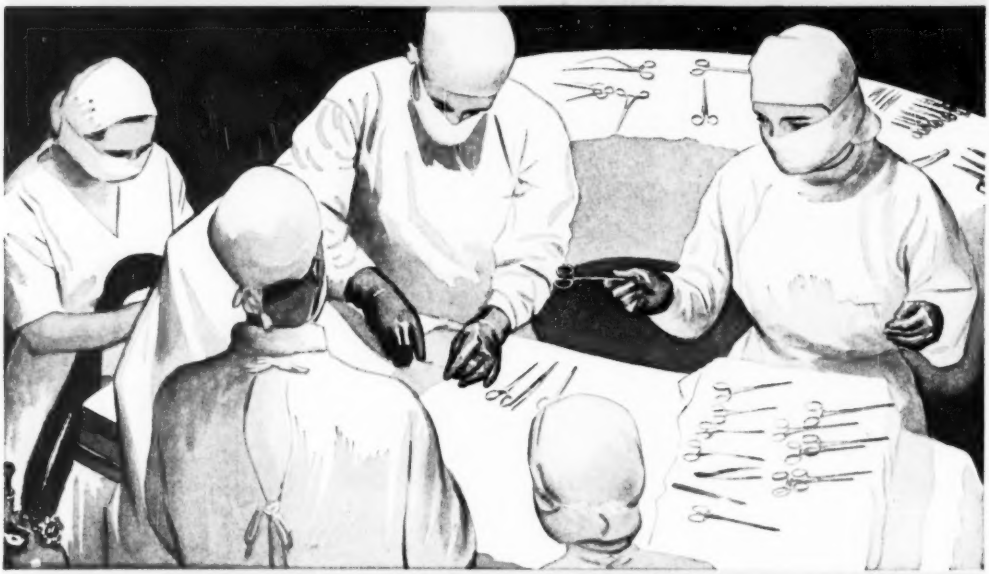
275 Central Avenue, Louisville 8, Kentucky

American Air Filter of Canada, Ltd., Montreal, P. Q. • Pacific Division Office, San Francisco, Cal.

®AAF

Teamwork

"Wanted in Surgery . . . wanted in Surgery!" If there is one place where teamwork counts, it is in the operating room. Teamwork is vital — in surgery — in industry.



What can we do to help insure the future of your business? That's what Butterworth engineers have been asking for 131 years — the question has special meaning today.

Thinking of new machines? We will do the utmost to meet your requirements, within the limits of our metal allotments. Making long range plans? Our engineers are at your service. Even now they are teamed with many of America's leading mills, thinking of the years ahead and planning with them to maintain their competitive position.

Butterworth service is offered too, to help your wet finishing department get the most out of what you now have — to keep equipment at peak efficiency. It may be only a spare part you need — but if you need it in a hurry, you'll get it in a hurry if it is humanly possible.

A letter, a wire or a phone call will put a Butterworth engineer on your team.

H. W. BUTTERWORTH & SONS COMPANY

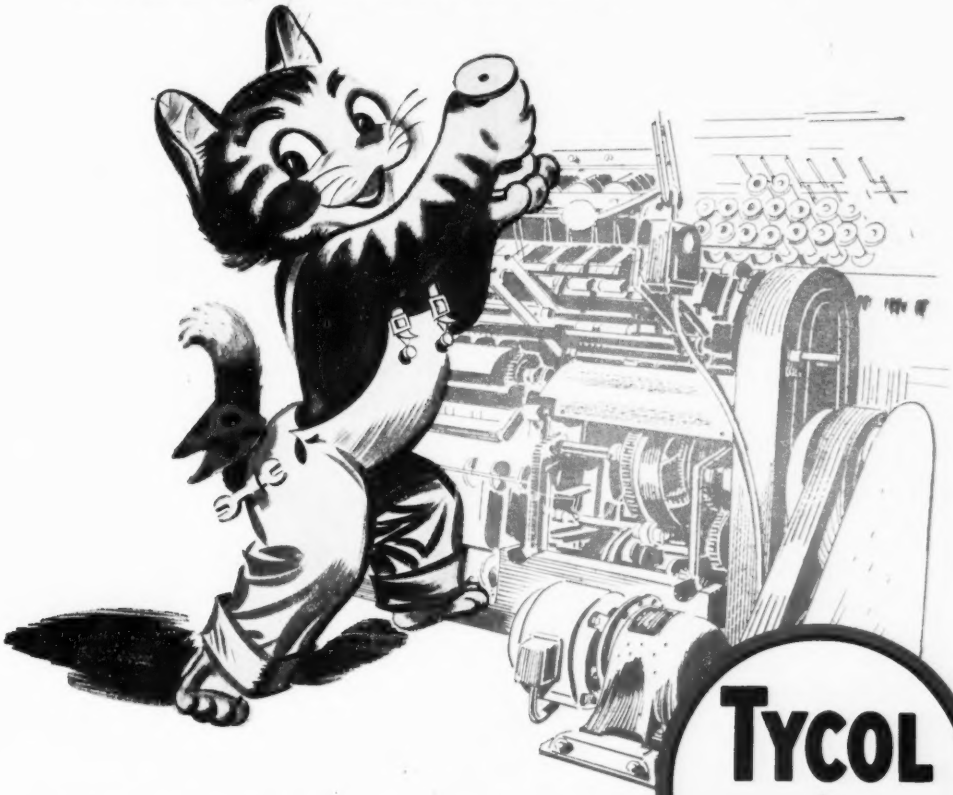
Bethayres, Pennsylvania

1211 Johnston Bldg., Charlotte, N.C. • 187 Westminster St., Providence, R.I.

Machines for Bleaching, Boiling-Out, Mercerizing, Dyeing, Finishing and Embossing : : Pot Spinning Machines for Synthetic Fibers
Calender Rolls : : Tenter Chains

BUTTERWORTH

"Tycol Alweave cuts power consumption... lessens tube loss... lowers equipment down time"



Check! Tycol Alweave Textile Oils reduce thread breakage—hold spindle drag and bolster losses to a minimum. Their high stability and easy scourability let mills operate at top production speeds, with far fewer stoppages.

Specially designed Tycol Alweave Oils are available in a wide range of both mineral and compounded grades. They'll step up efficiency in every mill process.

Learn more about Tycol Alweave Oils. Get in touch with your nearest Tide Water Associated office today.

TYCOL

INDUSTRIAL LUBRICANTS

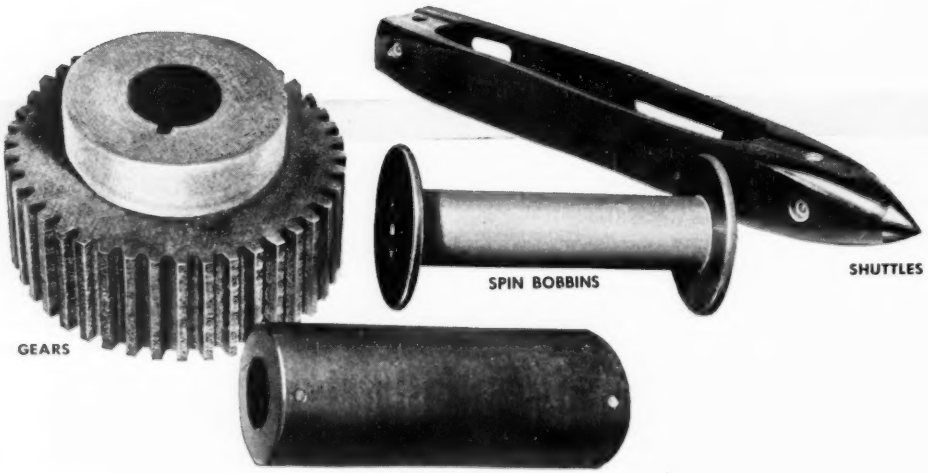
Boston • Charlotte, N. C. • Pittsburgh
Philadelphia • Chicago • Detroit
Tulsa • Cleveland • San Francisco

TIDE WATER ASSOCIATED OIL COMPANY

17 BATTERY PLACE - NEW YORK 4, N. Y.

SEND FOR A FREE COPY OF "TIDE WATER ASSOCIATED LUBRICANIA"

here's why... MORE and MORE mills are turning to micarta®...



because of these qualities . . .

Saves Weight, weighs half as much as aluminum.
Resists Compression, pound for pound greater than steel.
Resists Impact, absorbs and withstands severe shock.
Withstands Vibration, cushions repeated shock without effect.
Insulates like mica but greater flexibility.
Resists Corrosion, not affected by acids, oils, fumes.
Resists Heat and Cold from −112° F to 212° F.
Resists Moisture, in fact, water is its best lubricant.
Wears Slowly, Evenly, in many cases more slowly than metal.
Reduces Noise, absorbs vibrations, deadens noise.
Fabricates Easily, machined or punched with ordinary tools.

because of these flexibilities . . .

Laminated MICARTA includes standard structural shapes: plates, sheets, angles, channels, rods, tubes and zees. Occasionally this class includes simple molded shapes.

Molded MICARTA is the choice for complicated shapes, large production quantities of either simple or complicated shapes, or for certain properties better obtainable in form molding.

because micarta is basic

MICARTA is a tough and resilient basic material that welcomes comparison with other basic materials. This versatile plastic outlasts wood and metal in many punishing applications. Investigate MICARTA and you'll find it the economical solution to tough production problems.

YOU CAN BE SURE... IF IT'S
Westinghouse
micarta

for more information on how MICARTA can help solve your production problems, and give you advantages no metal can give you, please fill out the coupon below. A MICARTA representative will then call on you personally.

mail it today!

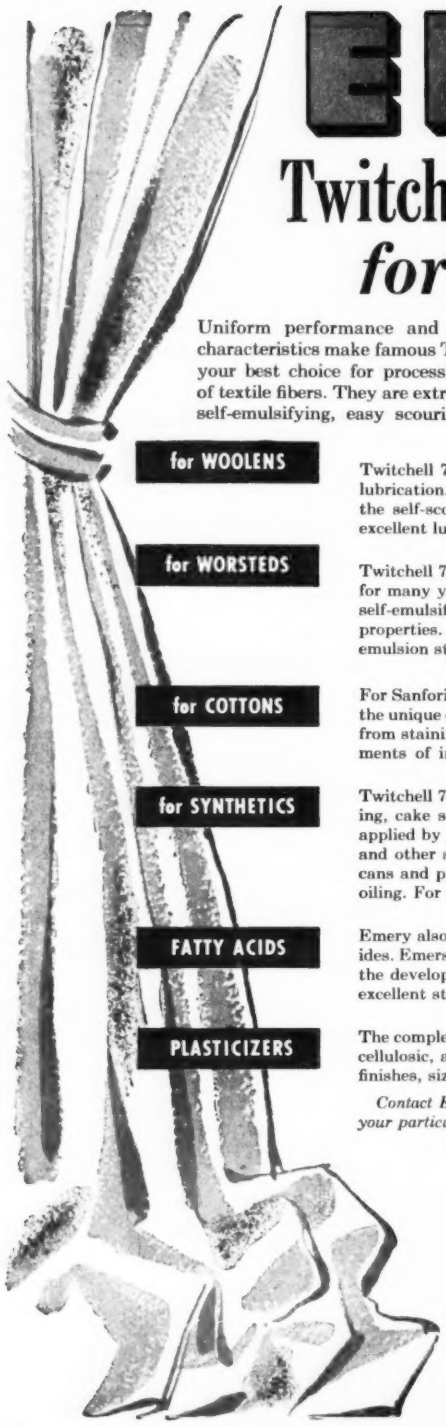
Westinghouse Electric Corporation
MICARTA Division, Trafford, Pa.
Attention: L. A. Pedley

Sir: (Please Check One)

☐ Please have your representative call
☐ Please send me the complete facts on MICART

Name _____ Company _____
Address _____
City _____ Zone _____ State _____

J-0650



EMERY

Twitchell Processing Oils... *for Better Textiles*

Uniform performance and outstanding characteristics make famous Twitchell Oils your best choice for processing all types of textile fibers. They are extremely stable, self-emulsifying, easy scouring, non-gum forming. They do not stain, oxidize, or become rancid . . . have superior spreading and penetrating properties . . . will not corrode processing equipment.

for WOOLENS

Twitchell 7410 is a low-cost, self-emulsifying wool oil providing excellent fiber lubrication. It is especially compounded to minimize staining. Twitchell 7430 is the self-scouring type which requires little or no soap for removal. Provides excellent lubrication for minimum fiber breakage.

for WORSTEDS

Twitchell 7420 is an exceptionally high-quality worsted oil which has been used for many years to minimize fiber breakage and staining. It scours easily and is self-emulsifying. Twitchell 7421 is a *new, high-quality* worsted oil with *anti-static* properties. Its unique combination of emulsion fluidity, resistance to yellowing, emulsion stability, and excellent scourability, makes 7421 the best value today.

for COTTONS

For Sanforized fabrics or regular finishing, Twitchell 7231, 7240, 7250 each offer the unique combination of fiber lubrication, fast rewetting, softness, and freedom from staining. These vary in degree for each product to meet the varied requirements of individual mills. All are compatible with common finishing agents.

for SYNTHETICS

Twitchell 7681, 7685, 7687 provide excellent lubrication and penetration for coning, cake soaking, finishing, and warp slashing. Self-emulsifiable, they can be applied by roll, spray, or wick. For warp slashing, they plasticize starch, gelatin, and other size films, provide surface lubrication, decrease size deposits on dry cans and provide a better break at split rods. They are also excellent for over-oiling. For crepe soaking, low cost Twitchell 7810 gives uniform pebble.

FATTY ACIDS

Emery also manufactures a complete line of high-quality fatty acids and glycerides. Emersol Stearic and Oleic Acids exhibit excellent resistance to oxidation and the development of rancidity, and high color stability. Emery Oleic Esters are excellent starting materials for sulfation.

PLASTICIZERS

The complete line of Plastolein Plasticizers are outstanding for all types of vinyl, cellulosic, and synthetic-rubber elastomers, including those for fabric coatings, finishes, sizings, etc.

Contact Emery's Development and Service Department for recommendations to fit your particular requirements.

Emery

Twitchell Oils, Emulsifiers
Fatty Acids & Derivatives
Plastolein Plasticizers

Emery Industries, Inc., Carew Tower, Dept. T-8, Cincinnati 2, Ohio

EXPORT: 5035 RCA Bldg., New York 20, N.Y.

Branch Offices:
3002 Woolworth Bldg., New York 7, N. Y.
401 N. Broad St., Philadelphia 8, Pa.
187 Perry St., Lowell, Mass.
221 N. LaSalle St., Chicago 1, Ill.
420 Market St., San Francisco 11, Calif.

Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles.

Cellitons®

for versatility • quality • economy

Cellitons dye:

ACETATE • NYLON • DYNEL • ORLON® • ACRILAN® • DACRON®

Outstanding properties are

complete line of shades
excellent dispersion
uniform standardization
fastness to light
simplicity of application

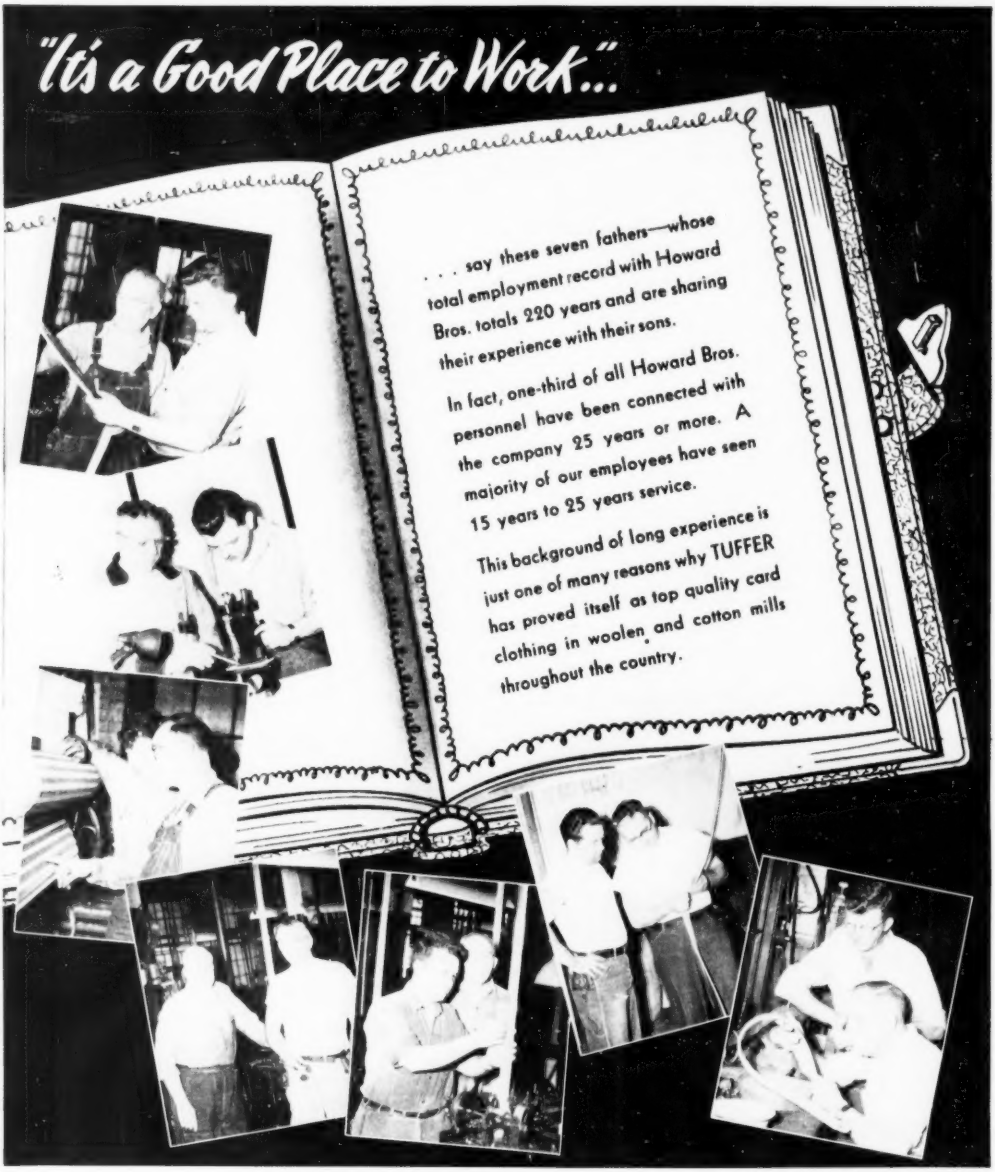
Samples of the CELLITONS can be obtained from any of our sales offices. Our Technical Laboratory will help select the proper dyestuff and method of application on any coloring problem.

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

"It's a Good Place to Work..."


. . . say these seven fathers—whose total employment record with Howard Bros. totals 220 years and are sharing their experience with their sons.
In fact, one-third of all Howard Bros. personnel have been connected with the company 25 years or more. A majority of our employees have seen 15 years to 25 years service.
This background of long experience is just one of many reasons why TUFFER has proved itself as top quality card clothing in woolen and cotton mills throughout the country.

Visit our booth at Sections 245-46, Southern Textile Exposition, Greenville, South Carolina, October 6-11

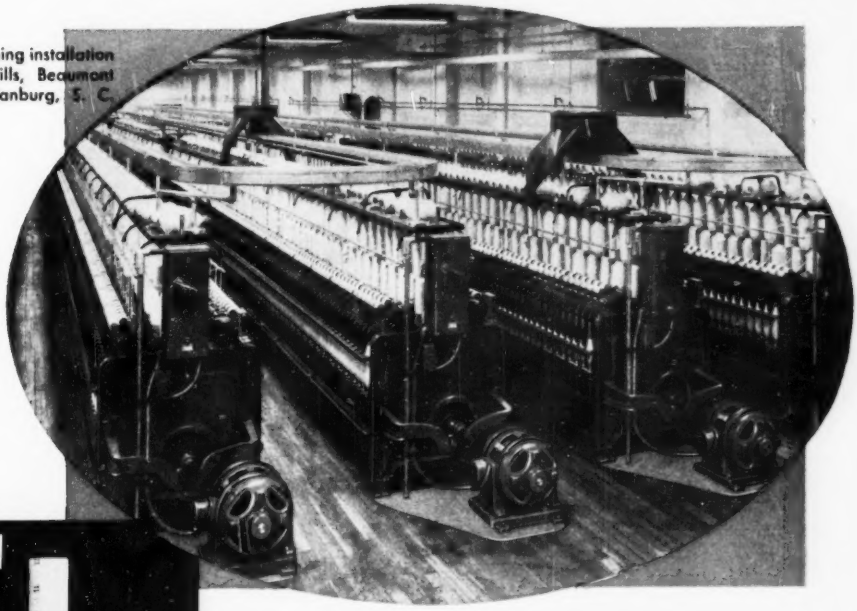
HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Georgia and Gastonia, N. C. Branch: Philadelphia, Pa.

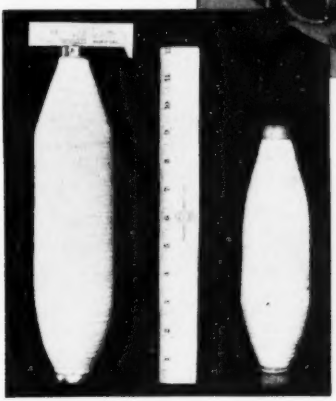
Direct Representation in Canada

. . . IT PAYS TO SPECIFY TUFFER CARD CLOTHING

WHITIN keeps pace with the demand for LARGE PACKAGE SPINNING



Model F3 Spinning installation at Spartan Mills, Beaumont Division, Spartanburg, S. C.



Unretouched photo of a large package spun on the "F3" and conventional size bobbin. The 11" package contains 7.50's and the net weight of yarn exceeds 16 oz.

Whitin's new "F3" Spinning Frame successfully meets all the demands of the Industry for large package spinning on coarse counts. These frames are designed for 11" traverse with filling wind, the package containing 16 oz. or more net weight of yarn, depending on the count.

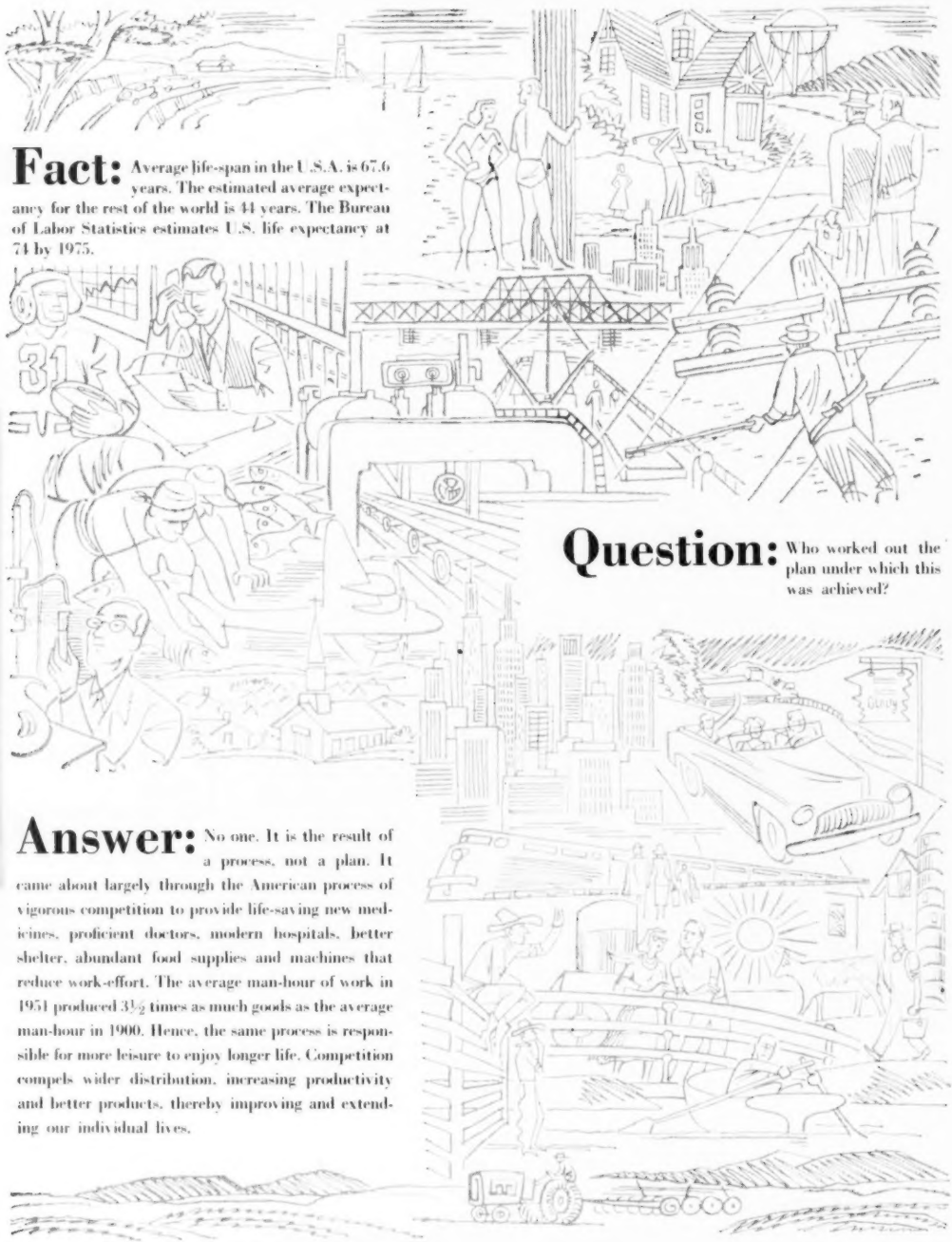
An ever-increasing number of mills have discovered that substantial economies can be effected by the use of large package spinning, particularly in running coarse numbers. Savings are definitely assured because large packages increase the length of the doffing cycle, reduce package handling in winding, — result in lower labor and winding costs.

Cost-conscious mills are finding a number of other interesting features on the Model F3 including (1) it requires no plant modifications to replace old frames. (2) it is a conventional type frame; your employees are already acquainted with its operation and understand its maintenance. Last, but not least, (3) it is comparable in initial cost to standard spinning frames.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.



Fact: Average life-span in the U.S.A. is 67.6 years. The estimated average expectancy for the rest of the world is 44 years. The Bureau of Labor Statistics estimates U.S. life expectancy at 74 by 1975.

Question: Who worked out the plan under which this was achieved?

Answer: No one. It is the result of a process, not a plan. It came about largely through the American process of vigorous competition to provide life-saving new medicines, proficient doctors, modern hospitals, better shelter, abundant food supplies and machines that reduce work-effort. The average man-hour of work in 1951 produced 3½ times as much goods as the average man-hour in 1900. Hence, the same process is responsible for more leisure to enjoy longer life. Competition compels wider distribution, increasing productivity and better products, thereby improving and extending our individual lives.

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THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER OF PEOPLE

HIGH FASHION DECREES
CRÊPE
...AND CRÊPE DECREES

C&K
LOOMS

THE CRÊPE DRESS: new figure in fashion

Inimitably **HATTIE CARNEGIE**: her version of the new soft dress . . . a slim silhouette, gracefully broken by a draped-to-the-hip floating panel, lined in contrasting color. At I. Magnin, California; Frost Bros., San Antonio; Martha Weatherred, Chicago. In rayon and acetate crêpe woven on looms manufactured by **CROMPTON AND KNOWLES LOOM WORKS.**

CRÊPE is front-page news again, in the high-fashion magazines, and in the smart shops and resorts. Says VOGUE: "Women have *always* loved the flattery of crêpe—it has such a cool flow and cling." Yes, crêpe is back . . . back to *stay*.

And today's modern crêpe fabric (entirely different from the old-fashioned crêpe of the 1920's) *has only one origin* . . . the modern S-6 Loom built by C&K in all widths . . . 2 x 1 . . . 4 x 1 . . . 4 x 4 . . . bobbin-changing . . . shuttle-changing . . . dobby . . . jacquard . . . call box . . . filling mixing . . . pick and pick . . . many shuttle sizes.

See the special section of advertising on crêpe in the July 1 issue of VOGUE (the C&K page is reproduced above). *Then see C&K!*

Crompton & Knowles LOOM WORKS

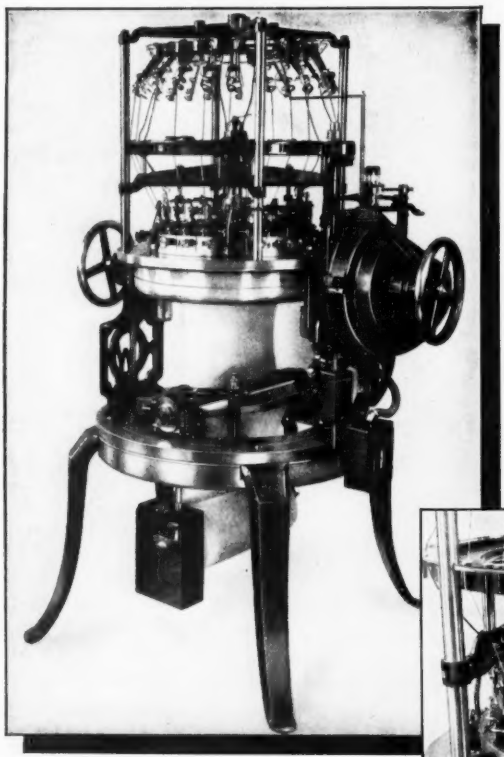
WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I. • CROMPTON & KNOWLES OF CANADA, LTD., MONTREAL, QUE.

YES it's PRECISION ENGINEERED

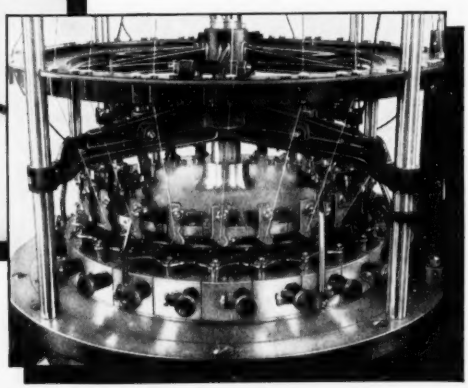
for INCREASED PRODUCTION, MAXIMUM EFFICIENCY

Wildman Multiple Feed Rib Machine



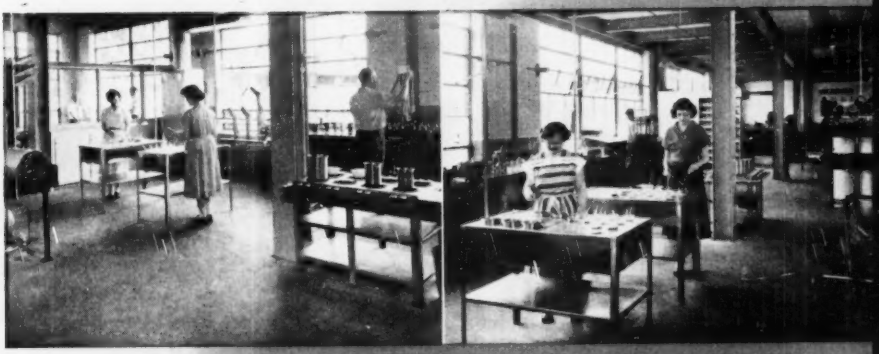
For you, here is better styling, uniform sizes and more than DOUBLE PRODUCTION . . . machine operation offers a much greater opportunity for pattern designs in sports wear and all other knitted garments . . . uniformity in garment sizes is guaranteed for yarn is fed under even, constant tension . . . production is doubled with a power increase of only about one-third.

PRECISION ENGINEERED for increased production, maximum efficiency.



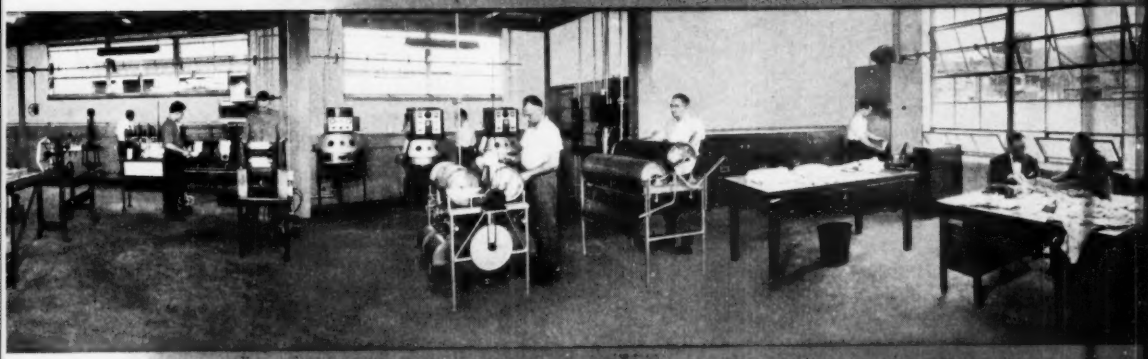
"One of Wildman's Finest"

WILDMAN MANUFACTURING COMPANY
Norristown, Pennsylvania



our modern service laboratories

assist you in solving your "dyeing problems"

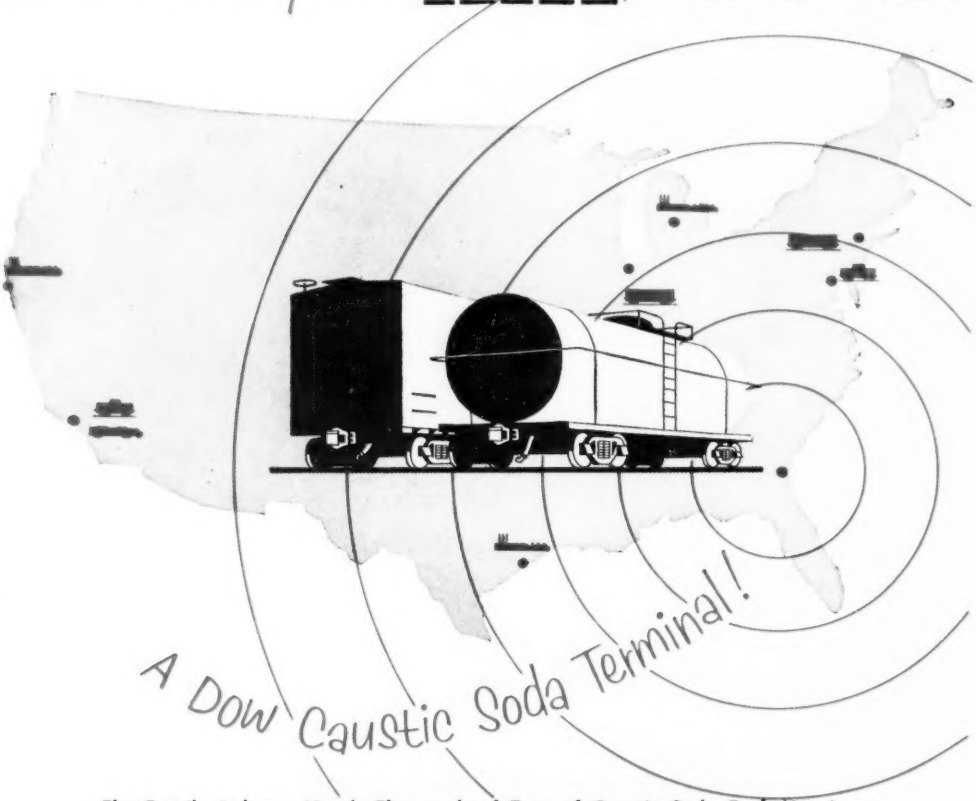


Send us your "dyeing problems." When we apply Althouse original ideas to them, together with our more modern methods of manufacture and our exclusive, built-to-order equipment, we'll come up with a practical, workable solution to enable you to use your own dyehouse technique. Make use of this free service. A few of our new, model dyeing laboratory departments are illustrated.

ALTHOUSE
Chemical Company, Inc.
READING, PENNSYLVANIA

pace-setter in precision dye-making

how close are you to Charleston, South Carolina?



The Textile Industry Needs Thousands of Tons of Caustic Soda Each Year!

To keep production lines rolling at a steady pace, the textile industry must have prompt caustic soda delivery. For this reason Dow maintains an outstanding network of distribution facilities. In addition to Dow's caustic soda solution, solid, flake and ground flake terminal in Charleston, South Carolina—Dow operates caustic soda plants in Midland, Michigan; Freeport, Texas and Pittsburg, California. Dow caustic soda solution is also shipped from bulk tank terminals in Los Angeles, California and Carteret, New Jersey. Caustic soda solid, flake and ground flake are also shipped from terminals in Port Newark, New Jersey and Chicago, Illinois. All of these distribution points play an important part in providing the textile industry with the superior service it requires.

wherever you are... *you're close to*

DOW CAUSTIC SODA

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Atlanta • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada

DOW

CHEMICALS

INDISPENSABLE TO INDUSTRY AND AGRICULTURE

New Pickers for Old

Your old pickers can be rebuilt exactly like new machines. The basic design of a picker has not changed in more than 50 years, and therefore a thoroughly modern picker can be built right into the old frames at a big saving in cost. The old frames are valuable, and are just as good as new ones.

Where it is not feasible to send your pickers to us for rebuilding, we will exchange them for rebuilt pickers of the same model. Our truck delivers a new picker at your plant and takes away an old one. The new picker can be making laps the day after it is delivered.

Where pickers do not need complete rebuilding, but should have a thorough overhauling, this work can be done right in your picker room with one of our skilled machinery erectors in charge of the work.

We keep a large stock of picker repair parts always on hand, and fill repair orders within 24 hours after their receipt. In an emergency, telephone us in the morning and you can have the picker repair parts at the mill the following day, if you are within about 500 miles of Greenwood.

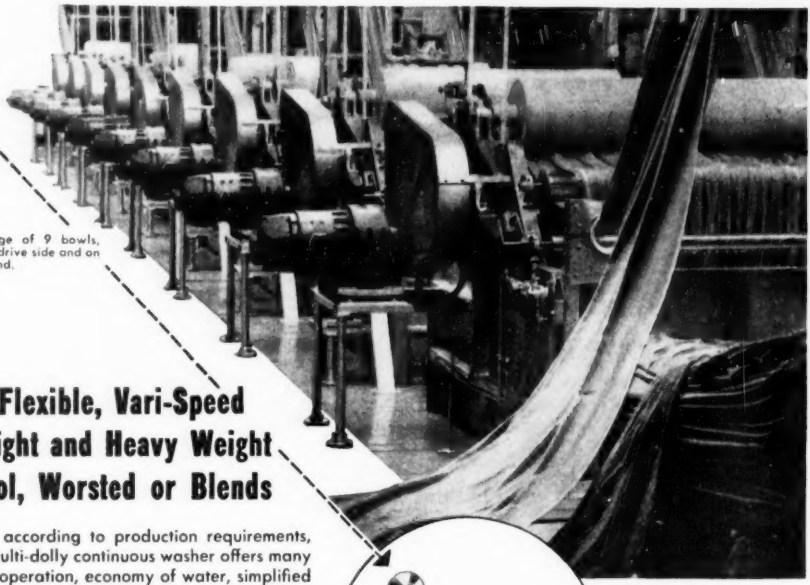
Aldrich Machine Works
Greenwood, South Carolina

The Fleet Line's

NEW LAXLOOP CONTINUOUS WASHER

PAT. APPLIED FOR

with FREE-LOOP Electri-matic Compensators



Complete range of 9 bowls, seen from the drive side and on the entering end.

An Improved, Flexible, Vari-Speed Machine for Light and Heavy Weight Fabrics of Wool, Worsted or Blends

Made in various sizes according to production requirements, this newly developed multi-dolly continuous washer offers many advantages in ease of operation, economy of water, simplified automatic synchronization, accessibility and reduced labor. Among the many improvements over existing washers are:

1 Stainless steel construction throughout.

2 AC-DC drive with rheostat speed control — no side shaft to prevent easy accessibility. Variable speed according to number of bowls and operating conditions.

3 Positive counter current flow, with constant uniform pre-determined liquor level in each tub. Made possible by R & L stainless steel Flooded Suction Low Head Pump.

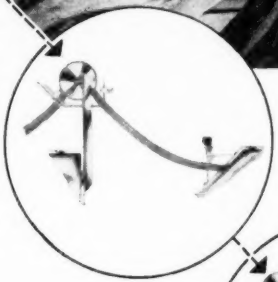
4 New shape of tub for smoother operation and fewer stops for rethreading.

5 Each unit kept in step by the new Riggs & Lombard FREE-LOOP Electri-matic Compensators. Cloth is tensionless throughout the range. Threading is faster and easier.

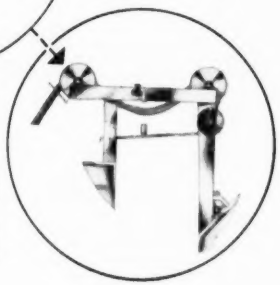
6 Folding or plaiting cleat rolls provided for smoother operation and uniform treatment.

7 Provision can be made for flow of liquor to stop automatically when machine stops, effecting increased hot water savings.

8 Cloth fully protected against damage by electric stop motions.



FREE-LOOP Electri-matic Compensator, Bar Type — When two loops of cloth complete electrical circuit by making contact with two metal bars, main drive on next tub speeds up or down as required.



FREE-LOOP Electri-matic Compensator, Trip Type — Loop of cloth runs in a synchronizing position between two electric eye units. When loop intercepts the proper beam, drive on the next tub changes speed as required. Trip bars can be used instead of photo-electric cells.

We will be glad to make recommendations on your particular washing problems.

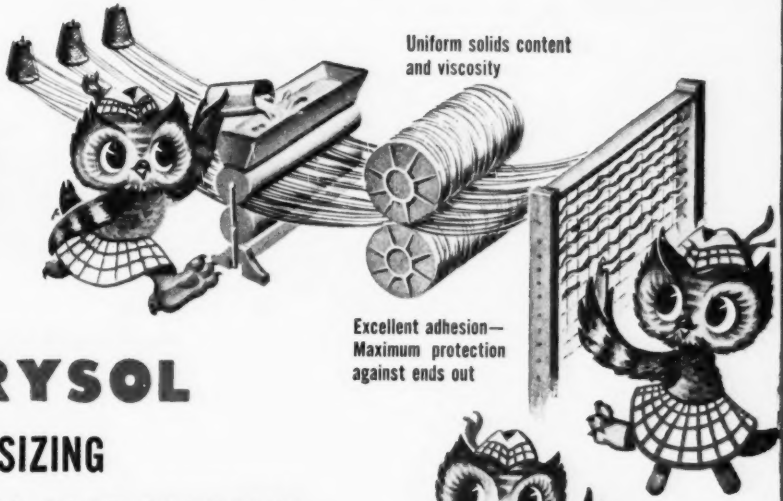
The Fleet Line.

A complete line of modern equipment for the successful handling of present-day carbonizing, wet-finishing and dyeing requirements.

RIGGS AND LOMBARD, INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

DOMESTIC AND CANADIAN AGENTS: Paul A. Merriam, 1491 Broad St., Prov., R. I. . Charles H. Dunker, 1236 So. Maple Ave., Los Angeles 15, Calif. . Albert R. Breen, 80 East Jackson Blvd., Chicago 4, Ill. . H. E. Mott Co., Ltd., Brantford, Ont.



ACRYSOL

NYLON SIZING ASSURES GOOD ADHESION— PREVENTS ENDS OUT

For warp sizing nylon—
ACRYSOL A-1

For single end sizing nylon—
ACRYSOL A-3

ACRYSOL sizes give essential protection to nylon weaving or tricot knitting yarns at lowest cost. Be wise and thrifty—write for full details of these polyacrylic acid sizes.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

ACRYSOL *is a trade-mark, Reg. U. S. Pat. Off. and in principal foreign countries.*

You Can't Depend on these Numbers . . .

But You CAN Depend on Ashworth's 4-6-7

4 FACTORIES (Fall River, Worcester, Philadelphia, Greenville) assure you of an uninterrupted supply of card clothing. Decentralized and strategically located, these factories can "pinch hit" for each other in emergencies.

6 REPAIR SHOPS (Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas (Textile Supply Co.)) assure convenient, economical and prompt reclothing and repair service.

7 DISTRIBUTING POINTS (Fall River, Worcester, Philadelphia, Charlotte, Greenville, Atlanta, Dallas (Textile Supply Co.)) make Ashworth products and consultation service more readily available.

AND DON'T FORGET "90". More than 90 years of experience in cards and card clothing — your guide to a consistently high standard of quality in manufacture and efficiency in performance.

Buy Ashworth Card Clothing and get DEPENDABILITY.

ASHWORTH BROS., INC.

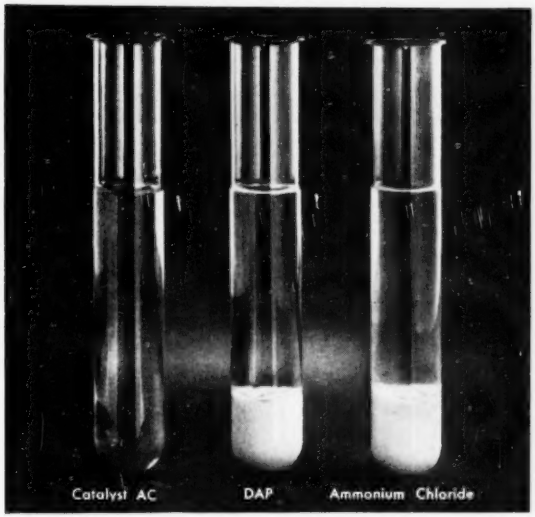
American Card Clothing Co. (Woolen Division)

FALL RIVER • WORCESTER • PHILADELPHIA • CHARLOTTE • GREENVILLE
ATLANTA • DALLAS (Textile Supply Co.)

PRODUCTS AND SERVICES

. . . Card Clothing For cotton, wool, worsted, silk, rayon and asbestos cards and for all types of napping machinery. Brusher clothing and card clothing for special purposes. Lickerin wire and garnet wire. Sole distributors for Platt's metallic wire. Lickerins and top flats reclothed.

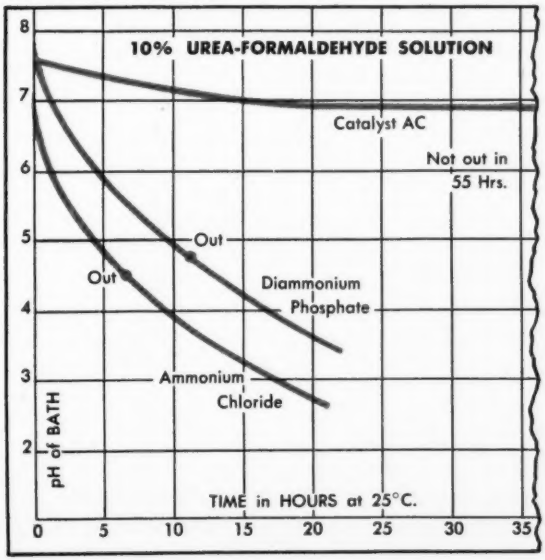
Ashworth CARD CLOTHING



Photograph demonstrates "snowing out" effect of DAP and ammonium chloride shown graphically in chart below. Ten percent solutions of urea-formaldehyde (Monsanto's Santaloom) and these catalysts were allowed to stand at 25°C., as was also a similar solution containing Catalyst AC. In the presence of DAP and ammonium chloride, resin particles settled out after only 10½ and 6½ hours respectively, while sample containing Catalyst AC remained clear and in complete solution for more than two days.

●

Chart shows "pH Change with Time"—10% Urea-Formaldehyde with three resin catalysts at 25°C. In bath catalyzed with ammonium chloride, pH dropped from 7.0 to 4.5 in 6½ hours, at which time resin settled out. In similar experiment with DAP as catalyst, resin particles "snowed out" when pH had dropped to 4.8 after 10½ hours. In bath containing resin and Catalyst AC, pH dropped only slightly below 7.0 and *resin had not begun to settle out after 55 hours.*



LONGER LIFE

FOR YOUR RESIN BATHS

. . . when you use Catalyst AC!

Take just a moment—think what it will mean to your own operations to have your resin baths remain stable and uniform for 24 hours or more—without refrigeration! Then ask your Monsanto representative (or write direct) for the full story on Catalyst AC.

Positive results of laboratory and plant applications over the past three years . . . with both urea and melamine resins . . . have proved that Catalyst AC offers several distinct advantages over other available compounds:

Stable Bath assures uniformity of resin application and retention.

No Refrigeration needed to hold down acidity and lengthen bath life.

Objectionable Odors Minimized . . . since no ammonium salts are present.

Proved Performance in producing desired qualities, such as washfastness and softer hands.

These benefits of Catalyst AC make it the outstanding resin catalyst available today . . . Why not give it a trial in your plant?

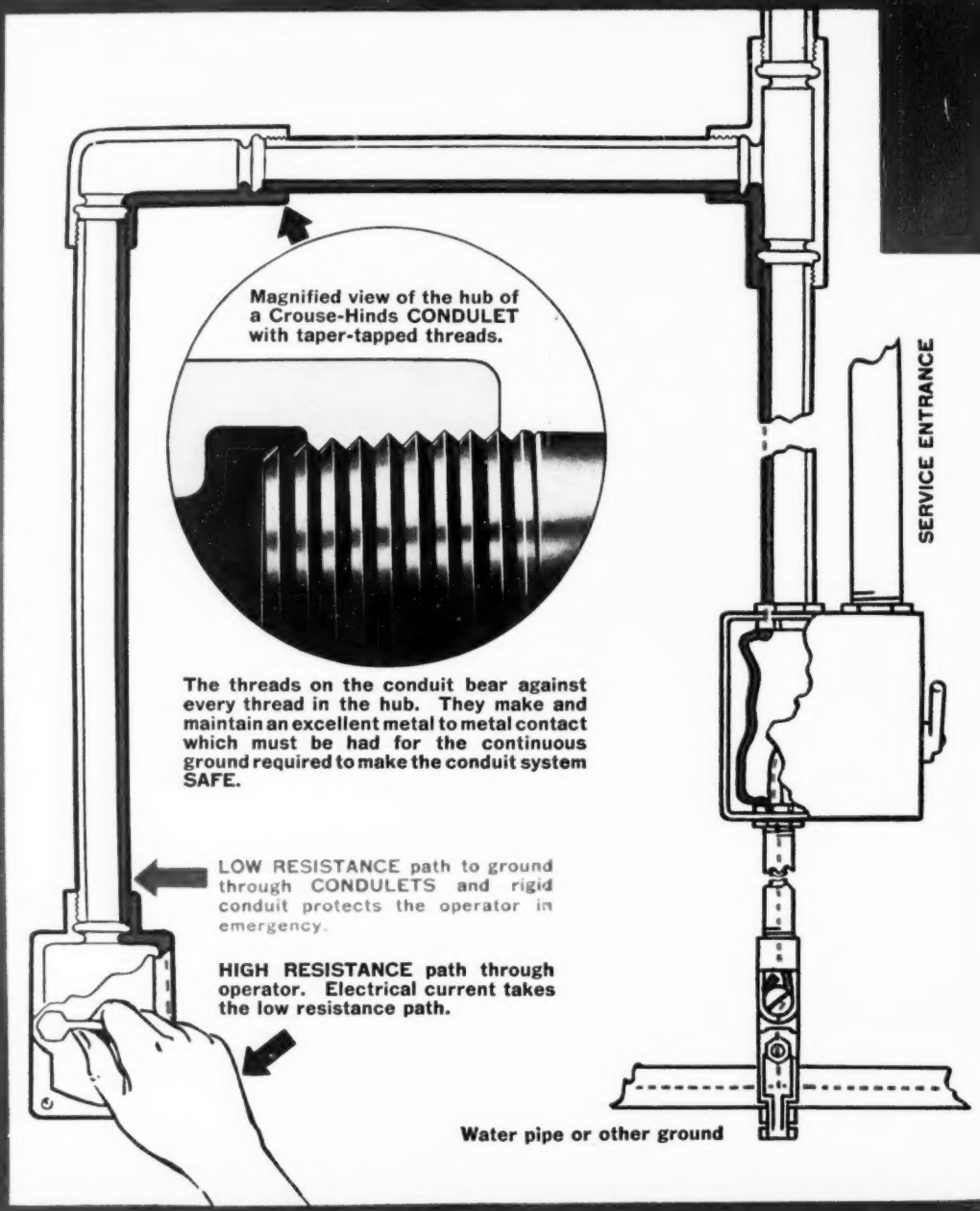
Santaloom: Reg. U. S. Pat. Off.

FOR MORE INFORMATION, WRITE
MONSANTO CHEMICAL COMPANY
TEXTILE CHEMICALS DEPT.
BOSTON 49, MASS.

MONSANTO
CHEMICALS—PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

CONDULETS® and rigid conduit


Magnified view of the hub of a Crouse-Hinds CONDULET with taper-tapped threads.
The threads on the conduit bear against every thread in the hub. They make and maintain an excellent metal to metal contact which must be had for the continuous ground required to make the conduit system SAFE.
LOW RESISTANCE path to ground through CONDULETS and rigid conduit protects the operator in emergency.
HIGH RESISTANCE path through operator. Electrical current takes the low resistance path.
SERVICE ENTRANCE
Water pipe or other ground

... the wiring method that gives you maximum SAFETY for workers AND property

Typical CONDULETS

Type T Obround Condulet

Type LR Obround Condulet

Type FS Condulet

Type WMK Enclosed Safety Switch Condulet

Type VC Vaportight Industrial Lighting Fixture

Type EVA Explosion-Proof Industrial Lighting Fixture

Type GUAC Explosion-Proof Junction Condulet

Type EPC Explosion-Proof Line Starter

A low resistance grounding circuit is of vital importance in any electrical system. The combination of rigid conduit and CONDULETS provides the safest installation because this combination assures the permanence of the grounding circuit. In any grounding path, every joint that isn't tight in the beginning or loosens from vibration makes a high resistance point. Such high resistance creates a hazard for workers and can cause disastrous fires.

All rigid conduit has tapered threads and all CONDULETS (made only by Crouse-Hinds) have taper threaded hubs. This combination makes a secure joint that is tight in the beginning and stays tight. These joints will not loosen from vibration and assure a reliable and permanent low resistance path to ground. This SAFETY feature provides maximum protection against personal injury and fire.

Besides safety, a CONDULET installation gives you these additional definite advantages:

- **MECHANICAL PROTECTION.** Crouse-Hinds sturdy cast Feraloy CONDULETS and rigid conduit provide the best possible protection against accidental damage to the wiring and equipment. Prevents costly shutdowns.
- **FLEXIBILITY.** To meet all the diverse requirements of modern electrical layouts, CONDULETS are made in a wide variety of shapes and sizes with varied hub arrangements, including a full line of CONDULETS with detachable hub plates.
- **ECONOMY.** The installed cost of Crouse-Hinds CONDULETS and rigid conduit compares favorably with other wiring methods. The added advantages make it the really economical method that pays dividends over the years.
- **CORROSION RESISTING.** Cast Feraloy CONDULETS give the best protection wherever moisture, dust, or corrosive atmospheres are present.
- **UNIVERSAL APPLICATION.** You can install galvanized CONDULETS and galvanized rigid conduit under all atmospheric conditions and in all occupancies.
- **QUALITY.** The trademark CONDULET stands for the highest quality, reliability, and long life.
- **VARIETY.** More than 15,000 items are listed in the CONDULET Catalog, including a complete explosion-proof and dust-tight line for use in hazardous locations.

On YOUR next electrical layout, plan to get all the benefits of sturdy cast Feraloy CONDULETS and rigid conduit . . . the universal wiring method.

* *CONDULET is a coined word registered in the U. S. Patent Office. It designates a product made only by the Crouse-Hinds Company.*

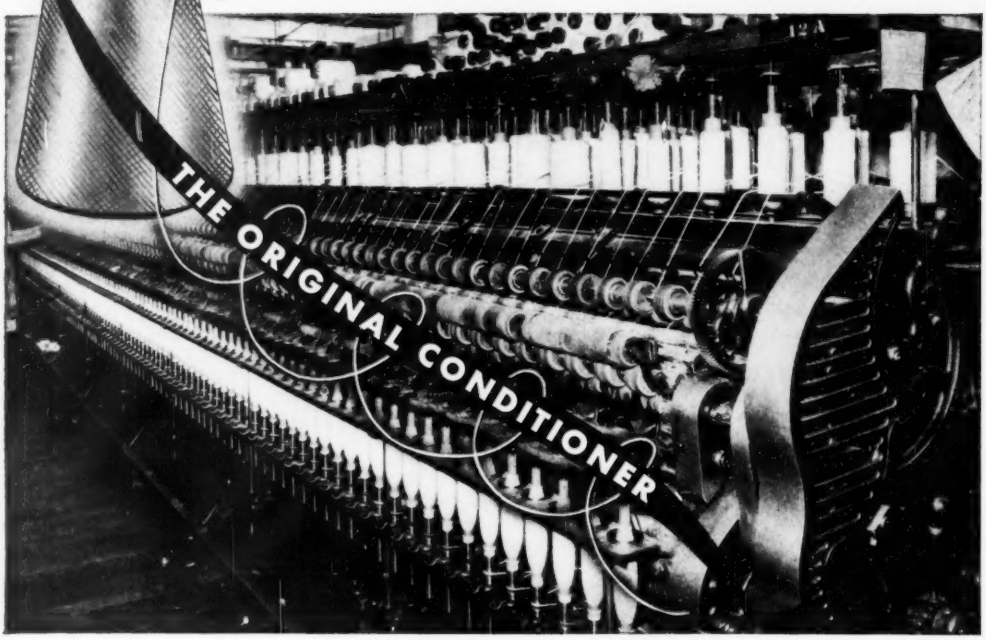
CROUSE-HINDS COMPANY
Syracuse 1, N. Y.

OFFICES: Albuquerque—Birmingham—Boston—Buffalo—Chicago—Cincinnati—Cleveland Dallas—Denver—Detroit—Houston—Indianapolis—Kansas City—Los Angeles—Milwaukee Minneapolis—New York—Philadelphia—Pittsburgh—Portland, Ore.—San Francisco Seattle—St. Louis—Washington. RESIDENT REPRESENTATIVES: Albany Atlanta—Baltimore—Charlotte—New Orleans—Richmond, Va. Crouse-Hinds Company of Canada, Ltd., Toronto, Ont.

A Nation-wide Distribution Through Electrical Wholesalers

CONDULETS • TRAFFIC SIGNALS • AIRPORT LIGHTING • FLOODLIGHTS

Specify MINEROL



For Controlled Flexibility

There Is No Substitute for Quality

BORNE Since 1874 SCRYMSER

Our Laboratory Facilities are always at your disposal

IN THE opening, picking, carding, and spinning operations — maximum efficiency demands flexibility of fibres — both natural and synthetic. And that is the very function MINEROL performs so satisfactorily.

MINEROL not only fits in with modern methods of humidification used by the Textile Industry but actually augments and transcends them. For MINEROL stabilizes processing conditions two ways — (1) by retaining moisture and (2) by lubricating fibres.

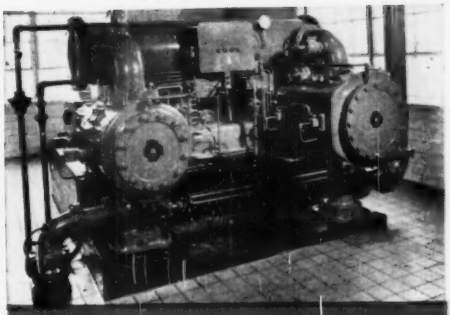
As a result, scores of case histories prove that MINEROL not only cuts costs and eliminates waste in time and material, but actually pays for itself in increased production. Better Employee Relations result from reduction in card waste and "fly".

If you would like complete information on MINEROL,—let us know the type, grade, and staple of the fibres you use, whether the fibres are to be carded or combed, and what type of opening or picking equipment you employ. With this information in hand — we'll do the rest.

BORNE, SCRYMSER COMPANY ELIZABETH, N. J. • CHARLOTTE, N. C.

USERS

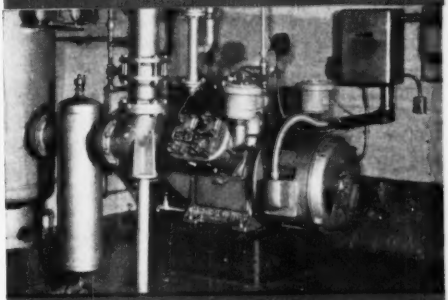
Master mechanic of a Pennsylvania processor tells of five years' experience with their HA. No service trouble whatsoever. In his opinion, the HA is "the best compressor made."



The Gardner-Denver HA Horizontal Two-Stage Air Compressor

TELL

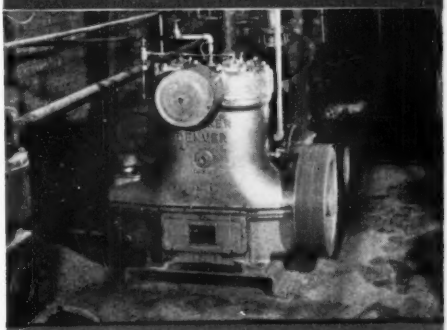
A Kansas City manufacturer has had a WB carrying his full air load almost 24 hours a day for several years. No overhaul required. Has replaced only a few small parts.



The Gardner-Denver WB Vertical Two-Stage Air Compressor

WHY

A manufacturer in Michigan reports he purchased an AA Compressor along with his present building. It's been supplying air for his operations for four years now, and hasn't been touched yet.



The Gardner-Denver AA Vertical Single-Stage Air Compressor

GARDNER-DENVER AIR COMPRESSORS

ARE SO OFTEN SELECTED FOR CONTINUOUS HEAVY-DUTY SERVICE IN MILL OR FACTORY. WRITE FOR DETAILS.

SINCE 1859 GARDNER-DENVER

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., Toronto, Ontario

THE QUALITY LEADER IN COMPRESSORS, PUMPS AND ROCK DRILLS

Atlanta, Ga.; Birmingham, Ala.; Knoxville, Tenn.; Washington, D. C.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.; New Orleans, La.

Marquette
ROLLER BEARING SPINDLES
with Full-Floating Footstep Bearing

standard equipment on U.S. ACME TWISTERS

MODERN THROWING EQUIPMENT

More than 1,000,000 Marquette Roller Bearing Spindles have been furnished as original equipment on U.S. Acme Twisters, manufactured by U.S. Textile Machine Co. They are operating efficiently at high speeds with heavy packages, requiring a minimum of power and maintenance.

On *any* frame, new or old, Marquette Roller Bearing Spindles will help you produce *more yarn at lower cost.* There is a Marquette Spindle for spinning or twisting every kind of yarn—cotton, synthetics, wool and worsted—and for all sizes of packages up to 12 lb. gross load.

We'll be glad to arrange for a test installation to prove their advantages in *your* mill. Contact our home office or one of our representatives.

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Representatives: C. H. WHITE, 2300 ROSWELL AVE., CHARLOTTE, N. C.; WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA.
JOHN A. MACKESY, 32 CUNNINGHAM AVE., GREENVILLE, HARRY [illegible], FAMILY, S. C.

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTOR

AUGUST, 1952

Textile Industries

formerly COTTON Textile Industries

(A supplement)

Can You Name Them?

(pictures inside)

THE MEN (and women) you see on these pages are or were at one time connected with the textile industry, either as mill men, suppliers, or otherwise closely associated.

Their pictures have appeared previously in TEXTILE INDUSTRIES, or its predecessor "Cotton."

Going through TI's file of cuts and seeing their faces brought back fond memories to the editors. We hope that you, too, will derive pleasure in identifying them.

Some of the people shown have passed on to their reward. They played their part in the progress of the textile industry, and it is fitting that their faces appear along with the living.

After you have tried your hand at this photo quiz, look at the answers at the bottom of page 5 of this folder. No fair peeking ahead of time though.

A supplement to the August 1952 issue of TEXTILE INDUSTRIES
Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia

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Names of Persons Pictured Here

1. J. A. Chapman, Jr.
2. J. C. Edwards
3. Stanley W. Converse
4. Oliver Jobson
5. H. H. Willis
6. H. G. Winget (1927)
7. Marshall Dilling
8. Edwin Howard (1933)
9. Frank D. Lockman
10. J. S. Lockmann
11. W. T. Morton
12. H. Ross Brock
13. R. W. Hinkham
14. Carl R. Harris
15. Frank L. Asbury, Jr.
16. John R. White
17. Majorie Fowin
18. W. H. Randolph
19. J. O. Corn
20. N. G. Hardie
21. L. J. Ushworth
22. Jesse W. Stribling
23. E. J. Kaddy
24. William P. Duiemple
25. Walter R. Pillard
26. J. M. Greer
27. H. E. Littlejohn
28. Joe C. Cobb
29. R. L. (Leona) Smith
30. John C. Turner
31. Frank Rowe, Jr.
32. H. F. (Smiley) Taylor, Jr.
33. J. O. Cole
34. George R. Snow (1937)
35. R. T. Smith
36. Robert West (1937)
37. H. Gilmer Winget (1938)
38. Alton D. Elliott
39. R. T. Smith
40. Herbie M. Green
41. M. R. Harden
42. A. G. Myers
43. W. W. Cobb
44. E. A. Terrell
45. J. C. Hipp
46. J. A. McFall
47. George R. Snow (1938)
48. E. M. Holt
49. George F. Stone
50. J. Cates Alexander (1943)
51. W. V. Hayes
52. W. H. Forster
53. J. C. Roberts
54. J. Cates Alexander (1933)
55. Joe Lyons
56. J. L. James
57. J. O. Creech
58. Dr. Claudius Murchison
59. George J. Taylor
60. John M. Reed
61. A. W. Henry
62. R. M. Howell
63. Howard Wood
64. Fred W. Phillips
65. Max Champion
66. Luther Hodges
67. Felix L. Thomason
68. Mrs. W. G. (Blanche Gray) Hamner
69. W. W. Sphawn
70. L. Everett Taylor
71. Harold F. Gulfer
72. Douglas G. Wood
73. Smart W. Robb
74. Douglas G. Cowan
75. D. W. Anderson
76. Charles A. Noe
77. Major S. W. Cramer
78. W. G. Stirling
79. P. W. Warrington
80. Harvey R. Rogers
81. G. G. Simmons
82. Mrs. G. G. Singleton
83. Robert R. West (1943)
84. J. L. Brannan
85. W. M. McLamine
86. R. F. Underwood
87. George Gillum
88. W. H. Miley, Jr.
89. L. V. Andrews
90. John C. Cook

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A supplement to the August 1952 issue of

Textile Industries

COTTON

806 Peachtree St., N. E., Atlanta 5, Georgia

Textile Industries
Vol. 115

News

Contrasting Ways to Rejuvenate a Mill. A move to a new area was advocated by Francis W. White, president of American Woolen Co., in a talk on the exodus of the woolen industry from the North to the South. He felt that despite the natural advantages of New England, such as nearness to raw material sources and major cloth markets, availability of skilled labor, and more favorable climate, the South offered opportunity for continued growth. The change, he said, would bring "new blood into what was an aging industry in the North."

Modernizing an old mill in the same location, on the other hand, was the attitude taken by Fieldcrest Mills who, when a more modern filament rayon and nylon weaving plant was needed, chose to revamp a former woolen mill situated in their community of Spray, N. C., instead of building a new plant elsewhere. The modernization process included improved air-conditioning, non-shadow simulated daylight lighting in place of windows, better accommodations for personnel, and improved machinery layout, resulting in greater efficiency in production.

Dielectric Welding of Hosiery Toe? Elimination of looping for men's half-hose knitted of nylon and other synthetics by substituting a simple thermoplastic operation is proposed by one sock manufacturer. If practicable, it would be equally advantageous to women's seamless hosiery. This manufacturer has investigated the possibility and has found out that no dielectric equipment manufacturer states that it can't be done, although no one has bothered to design the necessary apparatus. After fusing the thermopla
electrically produced
by closing the toe, th
be quickly trimmed
to this sock manufa
body have any ideas'

**Quartermaster Ge
ages Textile Develo**
General George A. F
termaster General, re
". . . we have nothin
would replace the
uses of textiles, and
velopments . . . the
open. Perhaps these
done even better by
are looking for the t
do the job best, wh
be found."

**Stevens Heads Gr
Parley.** Robert T. S
man of the board of
& Company, will ser
U. S. delegates to th
international cotton
ference in England

US IN BRIEF

noplastic fibers by duced heat, there- be, the closure can med . . . according anufacturer. Any- deas?

General Encour- velopment. Major A. Horkan, Quar- al, recently stated: thing in sight that the conventional and as to new de- the field is wide hese jobs may be er by textiles. We the thing that will wherever it may

s Group to Textile T. Stevens, chair- rd of J. P. Stevens l serve as leader of to the forthcoming otton goods con- nd where a study

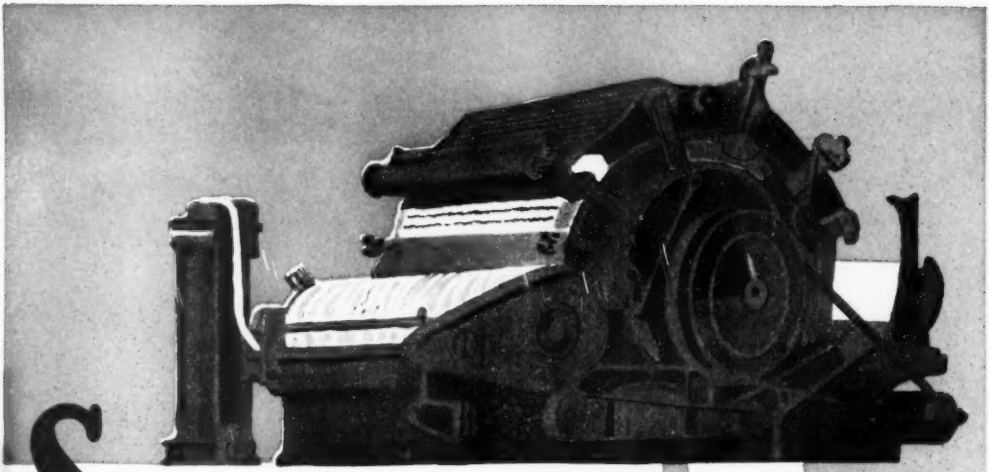
of the world textile situation will be made.

No Price Controls. Effective June 23 OPS suspended from price control sales by mills or converters of products with a fiber weight after production, but before finishing, of 50 per cent or more of cotton and less than 25 per cent of any one of either wool, rayon, nylon, or fabrics other than cotton.

Reservations for 1952 AATCC Meet. Complete information on hotel reservations for the annual convention in Boston will be sent to AATCC members early in September. Members desiring suites or reception rooms should communicate directly with one of the hotels as follows: Hotel Statler, Boston 17, Mass.; Sheraton Plaza, Boston 16; Hotel Bradford, Boston 16; Parker House, Boston 7; Hotel Touraine, Boston 16. "America Advances Through Creative Chemistry" is the slogan chosen for this 31st national convention.

80 Years and No Retirement. James Wesley Rearden has given 80 years of uninterrupted service to the Graniteville Co., Graniteville, S. C. The Graniteville Co. has made a standing offer to retire Mr. Rearden at any time he wishes. "As long as they let me, I'm going right ahead and work," he said.

Rilsan. The new French synthetic fiber Rilsan, which has been developed by the French chemical firm Pechiney, is reported to be the equal of nylon. The chief raw material for the new fiber is the castor oil seed, and French technical experts have recently examined the possibility of large



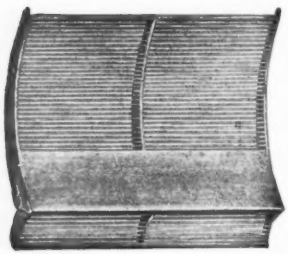
Stop Losing Dollars in Card Fly Waste!

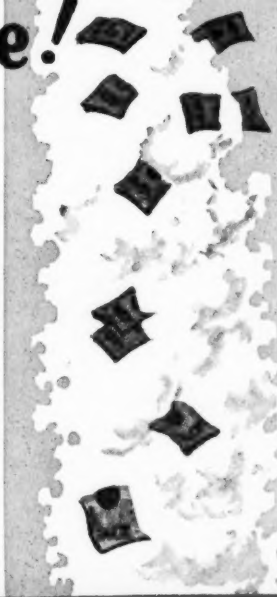
If you're finding good spinnable staple mixed in with the moats and trash under your cards, it's time you installed *Jenkins Card Screens.*

Jenkins card screens are engineered to set closely to your cylinder. Absolute uniformity in every part makes possible the perfect settings—impossible with inferior or damaged screens—which prevent excessive air current from blowing good staple into fly waste.

Improved grooving and patented grid bar construction, developed and used exclusively by Jenkins, assure you of maximum screen efficiency. Jenkins manufacturing and rebuilding service is backed by 37 years of experience, fully guaranteed.

You don't *have* to put up with costly, continuous waste under your cards. Why not talk to a Jenkins representative about it?





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ENGINEERED PRODUCTS

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scale cultivation of the plant in Brazil which normally has a large production of castor oil. Plans are being considered for the erection of a Rilsan plant in Brazil. In Central Africa special factories have been started to handle castor oil seed crops to provide the raw materials for the new fiber.

Army Duck, Webbing Pool. The Munitions Board has approved operating procedures and policies under which the military duck and webbing pool will buy supplies from industry and channel them to the armed services.

Curator of Old Slater Mill. Daniel Tower has been appointed curator for the Old Slater Mill at Pawtucket, R. I. The curator's duties will be to develop a museum within the mill. Mr. Tower has been connected with the Museum of Art, Rhode Island School of Design, and is a graduate of M. I. T. and Harvard.

QMC Wool Conversion. The New

New Springs Offices Combine Originality and Taste

Staff Prepared

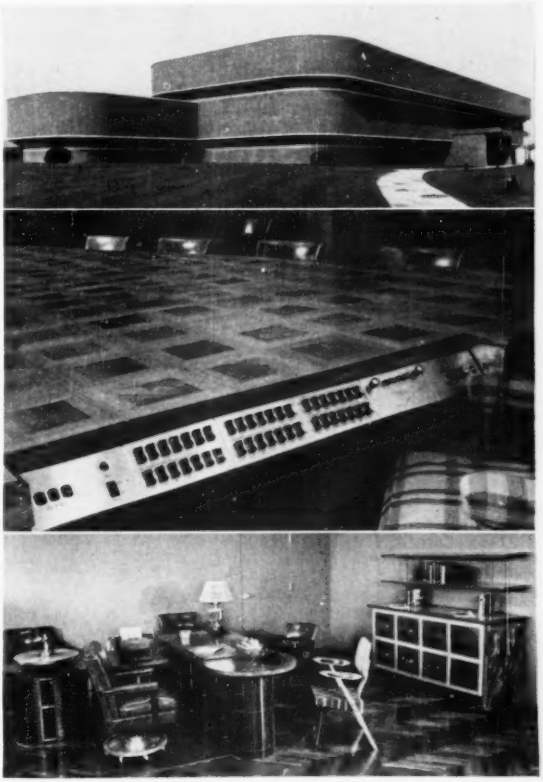
The new Fort Mill, S. C. offices of the Springs Cotton Mills are a very real example of what can be accomplished with a great deal of originality and a considerable amount of money. The building will serve as executive office space and will also house the testing laboratory, the pilot plant, and the cotton classing department.

Colonel Elliott Springs' office is, without question, unique. His desk is a massive structure of inlaid wood so constructed that at the push of a button, an even more massive extension rises from the floor to form a conference table almost as long as the Lancaster & Chester Railroad. At the Colonel's fingertips is a control board from which he can actuate, electrically, any number of office furnishings such as sliding panels, drapes, lights, buzzers, an electric razor, television, and a vibrating chair.

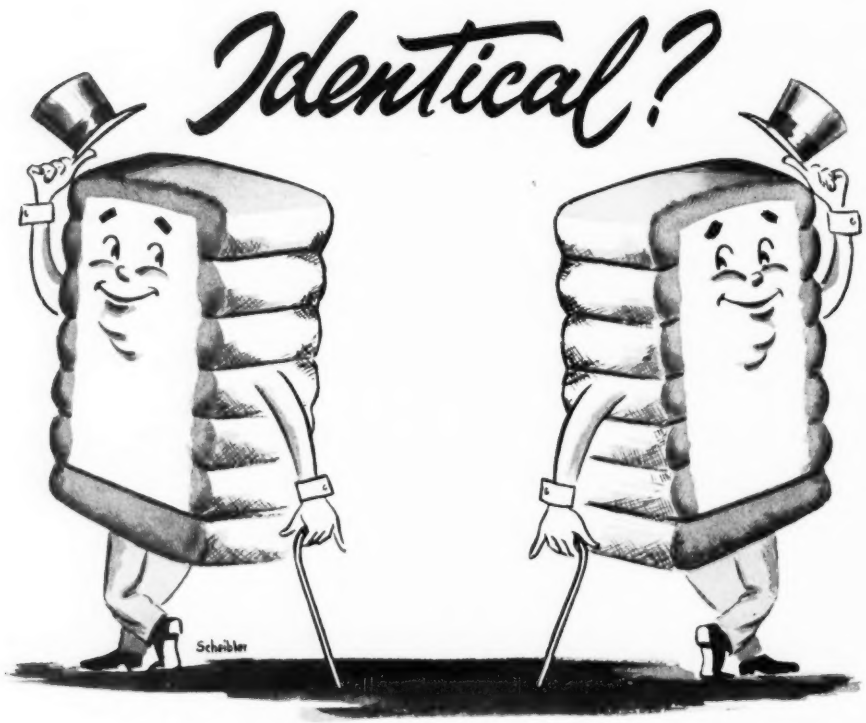
The other offices, while not so lavishly conceived, leave no doubt as to the identity of the personality behind them. There are chairs made by combining picker sticks, shuttles, spindles, and revolving clearers; desks made from cloth bales and feeder aprons, and book ends from electric meters. Overstuffed spinning frames make attractive settees.

The mill motif is followed in all decorating throughout the offices.

The area assigned to laboratory and pilot mill is spacious and equipment layout is excellent. Centralization of executive offices and testing should greatly aid communication and improve office efficiency.



Top photo: Exterior view of the new general offices of Springs Cotton Mills. Designed by Robert & Company Associates, the building is unique in that the walls are suspended from the roof and do not support it. This was done so that the windows might be set at an inverted angle of 45 degrees, thus permitting a maximum of illumination and a minimum of infra-red rays from the sun.
Center photo: Colonel Springs' desk. Note control board.
Bottom photo: One of the executive offices. Furniture was made of parts from textile equipment and supplies.



APPEARANCE IS SKIN DEEP!

Character brings out the true quality. Proper selection of cotton on fiber quality in addition to grade and staple insures best mill performance.

Consult our technical service engineers.

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COTTON MERCHANTS

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OTTO GOEDECKE, INC., OF ATLANTA

115 16th Street, N. W.

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56 South Front Street

Memphis, Tenn.

York QM Procurement Agency is negotiating with industry for the conversion of 2,105,000 pounds of raw wool (clean weight) into frieze cloth. Successful bidders will acquire title to the raw wool on a "where is, as is" basis and will evaluate the wool in determining the price of frieze cloth offered to the government.

British Guiana Fiber Research Co. The British Guiana Fiber Research Company Ltd., has recently been registered in London as a private company. The company will enter into an agreement between the Minister of Materials and the Chairman of the General Committee of the Association of Jute Spinners and Manufacturers, to carry out research, experiments, and tests in connection with the production of jute, flax, sisal, hemp, and other fibrous substances. Three directors will be appointed: one by the Secretary of State for the Colonies; one by Booker Bros., McConnell and Co.; and one by the Ministry of Materials and the Association of Jute Spinners and Manufacturers, jointly.

Girls Look Good as Knitters. A full-fashioned knitting mill equipped with both 24-section machines and single-head units began employing female trainee knitters, instead of men. Now the plant is 100% girl knitters. The superintendent reports that the girl knitters are getting as much production on the 51 gauge machines as men knitters in the plants of eastern Pennsylvania—and he is in a position to know. Also, the girls make fewer pull threads.

The training program for the girls is the same as for men, except the superintendent is much stricter when training the females. Some of the girl knitters go on a machine alone in about three weeks; some have done so quicker. Thus far there have been no serious accidents and only one machine crack-up. A needle-man is used on the job.

Long Staple Procurement Stopped. The U. S. Department of Agriculture is discontinuing indefinitely its procurement of foreign grown extra long staple cotton, either through direct purchase or acquisition by barter.

No Royalty-Free Nylon. U. S. District Court Judge Sylvester J. Ryan recently overruled a petition of Department of Justice seeking a decree compelling E. I. duPont de Nemours & Co., Inc. to grant royalty-free licenses under its nylon patents and processes.

Knit Goods Resin-Treated For Shrink Resistance. Resin treating

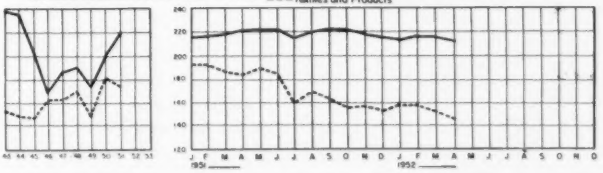
(*Continued on page 203*)

News in Brief

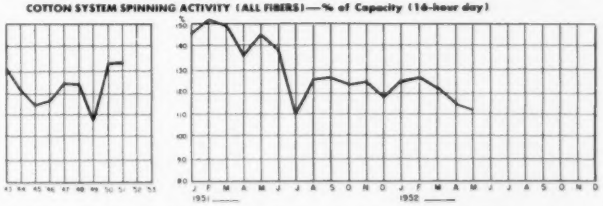
Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.

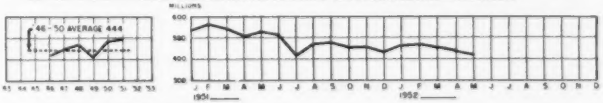
GENERAL BUSINESS (1935 - 1939 100) — Industrial Production Combined Index (unadjusted) - - - Textiles and Products



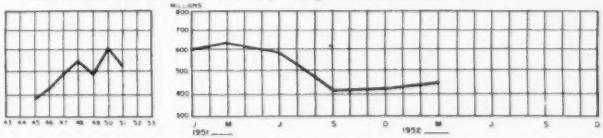
COTTON SYSTEM SPINNING ACTIVITY (ALL FIBERS)—% of Capacity (16-hour day)



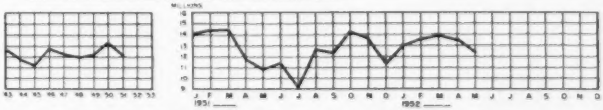
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS



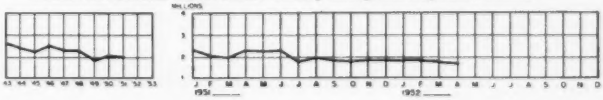
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)



HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)

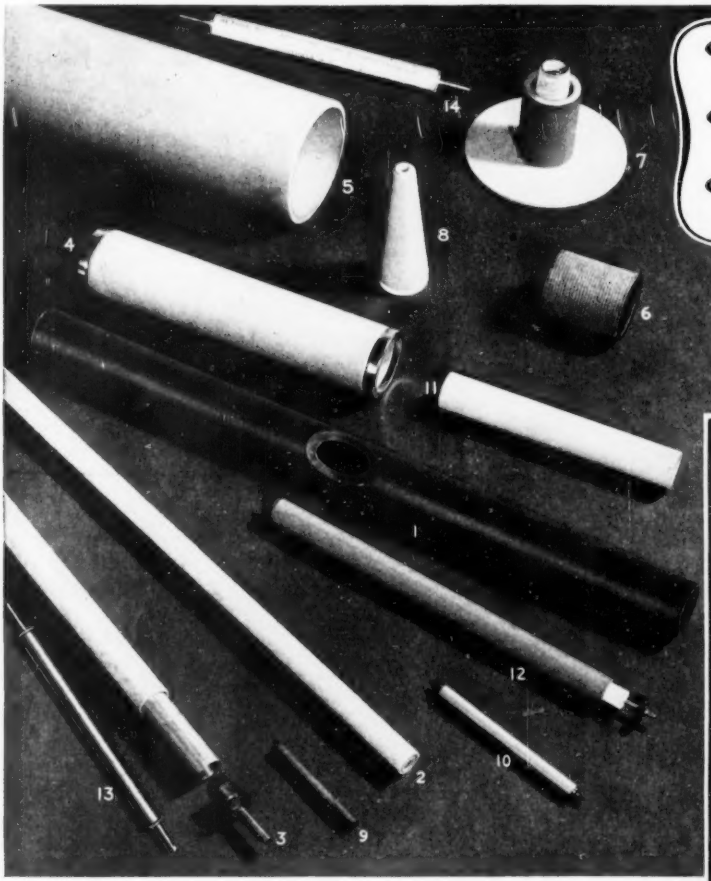


WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)



Serving The Textile Industry Since 1899

SONOCO *Textile Specialties*



Precision Paper Products

FOR THE TEXTILE INDUSTRY

1 Tie-in Tubes
2 Card Clearer Roll Covers
3 Topping (Thompson) Rolls and Covers
4. Pin Drafter Core
5 Loom Beam Repair Tubes
6 Spooler Cheese Cores
7 Rayon Cake Forms
8 Cork Covered Cones
9 Temple Roll Cores
10 Self-Weighted or Floating Roll Covers
11 Roving Tubes
12 Underclearer Rolls
13 Aluminum Ball Warp Mandrels
14 Ball Warp Tubes

If it's a problem in textiles that paper can solve, you can depend on SONOCO for exhaustive research and development. For over 50 years, SONOCO specialty items have kept pace with the ever-changing textile industry by providing greater efficiency, greater speed or reducing man hours and cost of operation.

17th Southern Textile Exposition, Oct. 6-14, 1952

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DEPENDABLE SOURCE OF SUPPLY

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Several Issues Affecting Raw Cotton

JUST FOR a little variety, let's take a look this month at several issues which affect raw cotton. Naturally, we are going to look at them from the standpoint of the manufacturer — the American manufacturer — who is the largest customer of the American cotton farmer. Here they are:

Change in Standards. Several weeks ago, the United States Department of Agriculture issued a call from Washington inviting the various cotton interests to come to the nation's capitol for a conference concerning the possibility of changing the standards for American upland cotton. Manufacturers naturally look askance at such an invitation because they have learned from long experience that a "re-examination" of cotton standards usually means an attempt on the part of the Department to lower these standards.

Some of you may recall that several years ago the situation at one of these conferences became so bad that all of the spinner delegates walked out of the meeting. Whether or not this "walk-out" served any effective purpose is subject to debate, but at least it indicates the strong feeling which existed at that time.

In the case of this most recent meeting, the Department of Agriculture had two proposals to place before the group. The first was that the customary 12-bale standard be changed to a 6-bale standard. Representatives were present from the various cotton shippers associations, from the cotton co-operatives, and from the various manufacturers' associations. Spokesman for the manufacturers' group was A. B. Emmert, vice-president and cotton buyer for Dan River Mills, Inc., Danville, Va.

The shippers and the co-ops expressed a rather violent disapproval of the change from the 12-bale standard to the 6-bale standard, and, as might be expected, the representatives of the mills expressed approval for the change. This followed the time-honored custom of shipper and manufacturer disagreeing on most questions affecting raw cotton.

The Department's second proposal was for a change in standards so that the new standards might "more nearly reflect current cotton crops." Again, as might be expected, the shipper group approved or favored the change in the standards, while the manufacturers' representatives disagreed. The meeting was held during Washington's June heat and it was perhaps to be expected that the session, itself, might reflect some of this torrid temperature. Before the day had ended there had been several sharp exchanges of verbal comment.

The meeting concluded on the note that the Department of Agriculture would accept the recommendations of all the groups which were represented, and, after considering the matter for several additional weeks, would take the standards to Europe where they might be viewed by foreign cotton people. This announcement set off a new series of skyrockets which resulted in one notable event — the lion and the lamb lay down together.

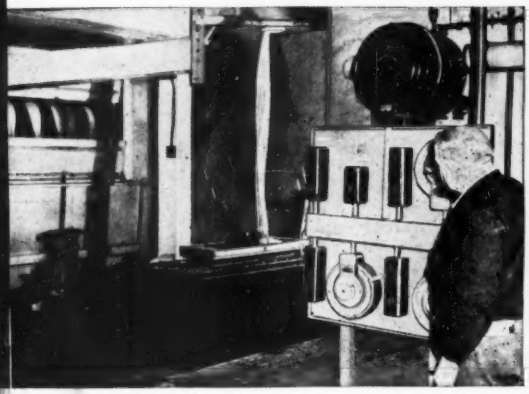
In short, both mill men and shippers were agreed that the Department of Agriculture's current method for seeking approval of new cotton standards is definitely wrong and should be corrected. Under the present system, the Department reserves to itself a 51% vote on cotton standards and gives to foreign cotton men a 49% vote. American manufacturers and American shippers are left out in the cold. As was pointed out by manufacturers' representatives, this is a most unfair situation because American mills consume approximately two-thirds of the American cotton crop each year, and for them not to have a vote, while their counterparts in foreign countries have a 49% vote, is most unfair.

Whether the proposed cotton standards were too high or too low must be left to those more expert in the ancient art than is this writer. One thing at least can be said, however, and that is that the Department's present voting arrangement seems to be antiquated, and if the standards are being lowered cotton is going to lose more of its customers. Each time cotton standards are lowered cotton becomes less competitive.

High Density Cotton. Continuing with our raw cotton lesson for the month, let's take a look at a

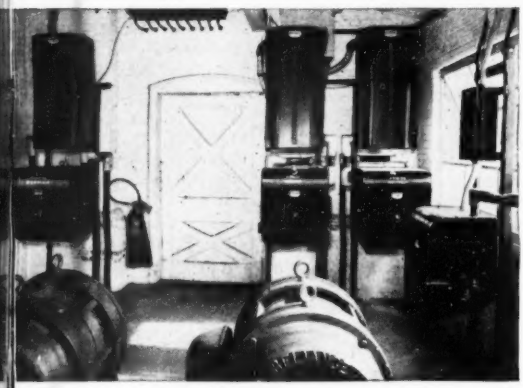
CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY

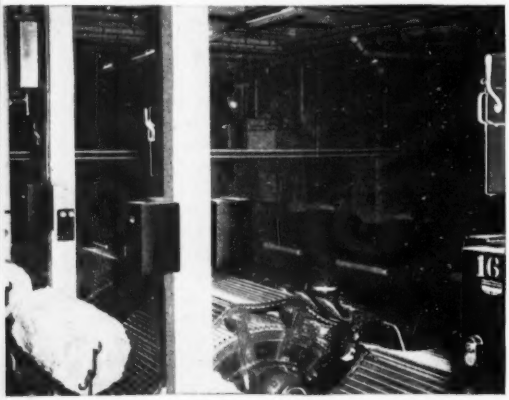


for PEPPERELL at Lewiston, Maine, where Cutler-Hammer Control is used at all steps of the continuous peroxide bleaching process.

for EXPOSITION at Atlanta. Not only are Cutler-Hammer Card Controllers used on these individual motor driven cards, but Cutler-Hammer Motor Control is used throughout the plant.



for EDDYSTONE at Eddystone, Pa. Cutler-Hammer Safety Switches and Autotransformer Type Manual Starters stand guard over the performance of m.g. sets for cloth printing machines. Cutler-Hammer control widely used here.



for a LARGE SOUTHERN MILL Cutler-Hammer Card Controllers are standard equipment in this great mill in North Carolina.

Ask the men who know

Cutler-Hammer Motor Control is the natural choice of men who know *both* textile industry requirements and comparative motor control performance. They know Cutler-Hammer dependability is not a mere competitive claim but a fact that can stand out clearly in a mill's production records to reflect favorably on their own ability and good judgment. They also know that Cutler-Hammer dependability is not an occasional happenstance... that it is the direct result of the longest and most intensive specialization in motor control engineering. And they know Cutler-Hammer dependability can safeguard *all* of their motor control needs, that Cutler-Hammer can furnish *any* type of control required... from the simplest starters to the most complex electronic equipment.

You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1456 St. Paul Ave., Milwaukee 1, Wis.

CUTLER-HAMMER CARD CONTROLLER

With integral drum type reverse switch

Here in one self-contained unit is all the control needed for a card... convenient pushbutton starting and stopping *plus* an integral reverse switch for cleaning and grinding. Card cannot be reversed accidentally or by any unauthorized person when controller case is padlocked. Easier to install. Easier and safer to use. Felt-gasketed against lint. Famous Cutler-Hammer Eutectic Element Overload Protection specially arranged to provide long starting time (required for cards) without loss of normal operating protection.

CUTLER-HAMMER
MOTOR CONTROL
C-H

proposal which a few weeks ago was being considered by the New York Cotton Exchange. By the time you read this, the question may have been decided, but our guess is that it will still be current and "hot," and that it will continue to occasion considerable comment wherever cotton men gather together to pull a few samples.

For sometime certain interests in the cotton trade have felt that high density cotton — bales which have been compressed for export — should be tenderable on futures contracts of the various cotton exchanges just as are the regulation size bales. Mill men, on the other hand, have argued that, when high density bales are shipped to a mill which does not have the proper opening room equipment, these bales create quite a problem.

You may recall that back in March the New York Cotton Exchange took a vote on this question and the proposal was defeated by 50 to 95. We state it this way, because if it had been 50 to 96 the proposal would have carried, since a two-thirds majority is necessary to change the bylaws of the New York Exchange. Since the vote was so close, the advocates of this measure asked the exchange to reopen the question, and a meeting was held in June to see whether or not this matter would be referred back to the Board of Managers of the New York Exchange.

This, too, was a warm question between shipper and mill representatives, but, in this instance, the shipper groups were divided in their stand. The shippers in the southeastern states were very strongly against the delivery of high density cotton. Those in the Memphis and New Orleans territory, as well as in the west, favored the proposal.

After a considerable amount of debate, the question before the floor was whether or not the members of the exchange wished to recommend to the Board of Managers that they reconsider the question. After the votes were all in, it was found that those who favored the submission of high density cotton on futures contracts had won by 103 votes to 79. Mr. Emmert of Dan River was again in the forefront of this fight, and this time he was accompanied by T. D. Trulock of Monarch Mills, Union, South Carolina.

At the present time, the Board of Managers of the exchange has a sort of mandate from the members (by a vote of 103 to 79) to reconsider this question. If the Board of Managers decides to do so, it can order that another vote be taken by the members of the exchange on the question of whether or not high density cotton will be tenderable on futures contracts. It is probable that this matter will be coming up shortly and all mills and cotton men connected with mills should be watching for it. Mills which have a vote on the exchange should make plans to cast their vote, either directly or by proxy. Mills which do not have a vote on the exchange should keep in touch with friends in other allied fields and do everything possible to secure their proxies, so that these proxies may be voted against the proposal at the proper time.

Abernethy Bill. And now comes a "piece de resistance." Back during the torrid weeks of the early summer, Congressman Abernethy of Mississippi dreamed up a little bill which sounded like excellent politics. It was passed by the House in the merry month of June and, as presently constituted, provides that the standard grade for purposes of computing parity for price support shall change from Middling to Low Middling 7/8" cotton when the government crop reports indicate an estimated 1952 production of 16 million bales.

In other words, Middling 7/8" cotton shall be the standard grade for parity until the government crop reporting service indicates 16 million bales in prospect for 1952, and then presumably on that day the basis shall change to Low Middling 7/8" cotton. The effect of this, based on the loan values in the new law, would be to increase the support price 430 points or slightly over 4c a pound. In some parts of the cotton trade, this

(*Continued on page* 181)

Aug. 22-23—Textile Quality Control meeting. Clemson College, S. C.

Sept. 4-5—Annual convention, **Southern Hosiery Manufacturers Association,** Hotel Roanoke, Roanoke, Va.

Sept. 8-10—Third **National Standardization Conference,** sponsored by the American Standards Association, Museum of Science and Industry, Chicago, Ill. To be held in conjunction with Centennial of Engineering.

Sept. 9-13—7th **National Chemical Society Exhibit,** the Coliseum, Chicago, Ill.

Sept. 10-11—Fall meeting, **The Fiber Society, Inc.,** Princeton, N. J.

Sept. 11-13—Third Canadian Textile Seminar, Queens University, Kingston, Ontario, Canada (previously scheduled for Sept. 18-20).

Sept. 25-26—Annual convention, **National Association of Cotton Manufacturers,** Wentworth-by-the-Sea, Portsmouth, N. H.

Oct. 6-11—Seventeenth **Southern Textile Exposition,** Textile Hall, Greenville, S. C.

Oct. 16-17—Annual convention, **The Quartermaster Association,** Biltmore Hotel, Atlanta, Ga.

Nov. 5-7—Sixteenth annual Time and Motion Study and Management Clinic, Hotel Sheraton, Chicago, Ill.

Nov. 6-8—31st annual convention of the **American Association of Textile Chemists and Colorists;** also the Textile Dyeing and Finishing Exposition, Hotel Statler, Boston, Mass.

Nov. 14-22—Annual conventions, **Carded Yarn Association** and **Southern Combed Yarn Spinners Association.** Convention cruise to Bermuda.

Nov. 19—34th annual meeting, **American Standards Association,** Waldorf-Astoria, New York, N. Y.

Dec. 1-6—20th **National Exposition of Power and Mechanical Engineering,** Grand Central Palace, New York City.

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Frames in Your Weaving Picture!
Walker Heddle Frames are designed to give you quick, easy warp adjustment.
Made from carefully selected, straight grained wood, they have an especially smooth, moisture proof finish to give lint-free operation and long service life.
The full line of hardware is cadmium plated to resist rust and designed to give easy adjustment.
Use Walker frames in your weaving picture.
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NEW Equipment AND MATERIALS

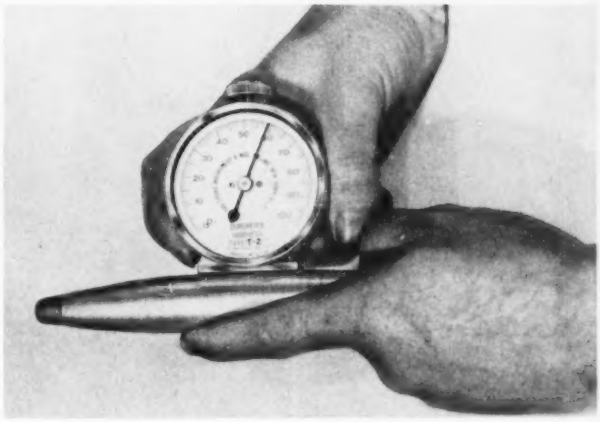
New Instrument for Testing Winding Density on Cones, Spools, Bobbins, etc.

The "Durometer" is a new instrument for testing the density of windings on cones, spools, bobbins, cops, and package dyeing tubes.

According to the manufacturer, it consists of an easy-to-read dial graduated in units from zero to 100. At the bottom, a blunt pin projects a standard distance. When pressed firmly against a test sample, the pin is forced back into the instrument in proportion to the density of the winding. The tighter the winding, the more it resists penetration of the pin and consequently, the higher the reading.

The pin is mounted on standardized twin leaf springs within the instrument. A pressure of two pounds is required to deflect these springs to their maximum limit. On an impenetrable test sample, this would yield a dial reading of 100, or slightly in excess thereof.

The ready adaptability of the device to free hand testing permits tests to be made on bobbins that are attached to winding machines, etc. The instrument may be held in any position, even inverted.



Shore Instrument's "Durometer" for testing winding density.

An operating stand is also available to facilitate the use of the "Durometer."

Shore Instrument & Manufacturing Company, Inc., 90-35 Van Wyck Expressway, Jamaica 35, N. Y.

For additional data, request item H-101, using business reply card on page 196.

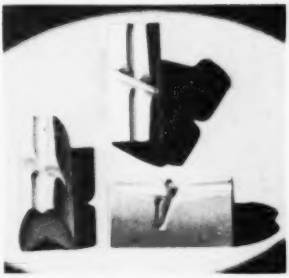
Constant Yarn Tension Feature of Thread Guide →

A thread guide now available for use on winders, redraws, and uptwisters is designed so that constant yarn tension is maintained during the entire traverse, including the reversing points, the manufacturer claims. Build-up of excess yarn on package ends is said to be eliminated and clean, smooth packages of high uniformity produced.

According to the announcement, a carefully calculated cross-slot causes the yarn to flow smoothly with no variation in tension.

While the improved AlSiMag guide will fit many types of machines, it was designed primarily for Universal's Atwood Redraw Model No. 200 and the Atwood Utility Uptwister.

Since these new guides require a slight adjustment in traverse (shorter than for conventional guides), they should be tested on a full frame. Therefore the manufacturer offers to consign guides for a full frame test. These guides may be returned at any time within twelve months for full credit. Specify AlSiMag Part No. GE-26221.

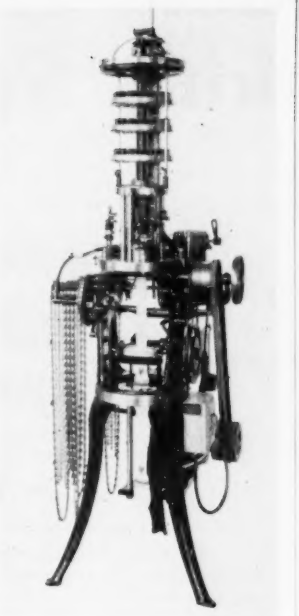


American Lava Corp., Chattanooga 5, Tenn.

For additional data, request item H-116, using business reply card on page 196.

The First Name in Packaging
Since 1868
ATLANTA PAPER CO.
PACKAGING FOR THE TEXTILE INDUSTRY
Corrugated Shipping Cases Display Folding Boxes
APACO
ESTABLISHED 1868
ATLANTA PAPER COMPANY
ATLANTA 2, GEORGIA

Machine Knits Fancy Rib Mittens



This is the Model S-49G Multi-Design Ribber for the manufacture of fancy-pattern rib mittens which was displayed for the first time at the Knitting & Allied Crafts Exposition last April and briefly described on page 118 of TEXTILE INDUSTRIES for June.

With this machine, the manufacturer claims, Multi-Design wrap patterns can be introduced into true rib fabric. It is possible to wrap a different color on every needle, he reports, and with the 25-step pattern mechanism a virtually unlimited scope in the choice of fabric designs is provided.

Machine is available in a full range of diameters and is capable of speeds up to 110 rpm. The five-color body yarns are protected by automatic stop motions.

Fidelity Machine Co., Inc., Philadelphia 24, Pa.

For additional data, request item H-115, using business reply card on page 196.

Hydraulic Lifter for Heavy Cloth Rolls

A hydraulic lifter for raising and lowering heavy rolls in restricted areas is now available. The device will load and unload rolls of cloth, leather, rubber belting, etc. weighing up to 1,000 pounds, the manufacturer claims, from presses, looms, etc.

Advantages cited: it protects rolls of expensive materials from being damaged; speeds up roll changing and handling; in many cases it enables one man to do the job; it eliminates need for overhead cranes and slings; increases safety.

The truck is custom-built to suit individual requirements. It may be furnished with trunions as pictured for handling rolls that have a shaft or spindle or with a scoop for handling cylindrical objects, such as barrels, that have no shaft.

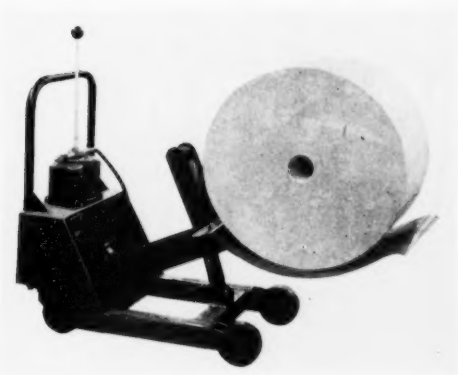
For horizontal movement, the lifter is mounted on four unbreakable steel casters, two rigid and two swivel for easy steering. A floor lock can also be furnished. Wheelbase dimensions are kept small so the truck can be maneuvered through narrow aisles and between closely spaced machinery.

Although most lifters are hand operated, an electric hydraulic power unit can be installed, if desired.

Service Caster & Truck Corp., Albion, Mich.

For additional data, request item H-103, using business reply card on page 196.

Service Caster's hydraulic lifter for heavy cloth rolls.



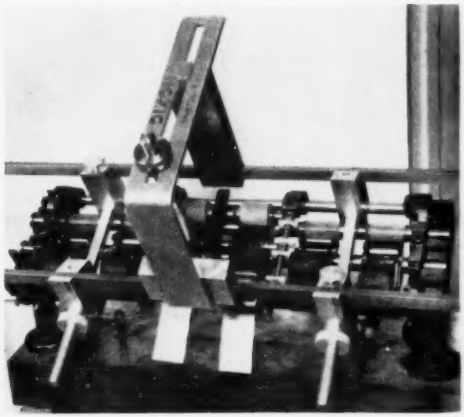
Roll Weight Measurer

The Dixon Weight Measurer for mechanically measuring the weight applied to top rolls has been completely redesigned, the manufacturer states. Made entirely of aluminum, once it is assembled it can be carried with ease to any point in the spinning room.

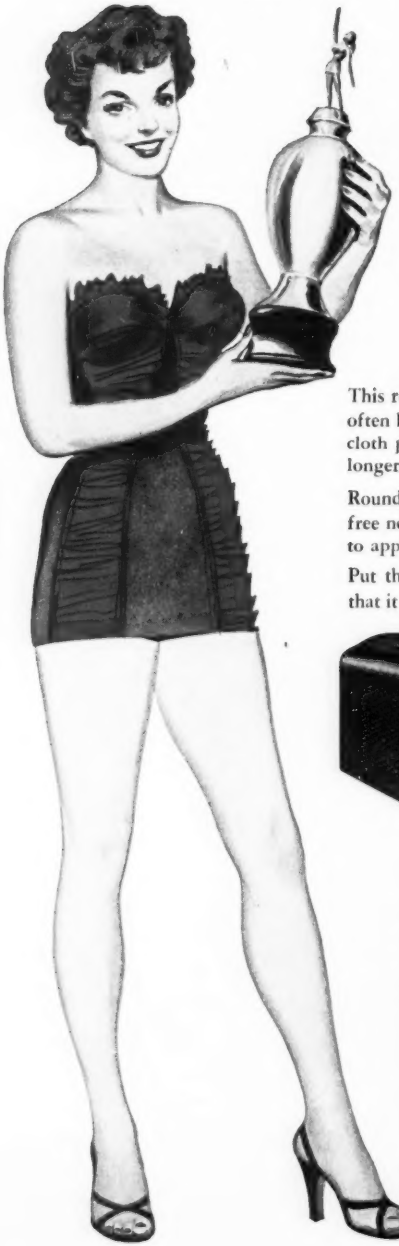
The device can be set on a frame

(Continued on page 157)

The Dixon weight measurer for top rolls.



Speaking of picking beauties—



take a look at this redhead!

This red-headed Dayton Super Picker consistently outlasts other makes—often by as much as 2 to 1! That longer life means less down-time, more cloth production. And because the Super Picker runs cooler, shuttles last longer.

Rounded front edges eliminate hanging filling . . . narrow back permits free non-wear on lay-in strap . . . flared bottom makes picker stick easier to apply. May be used on high-speed and standard speed looms.

Put the Super Picker to work on your looms—*prove* in your own mill that it will outpick any ordinary picker on the market! Ask your salesman, or: Dayton Rubber Co., Textile Div., Woodside Bldg., Greenville, S. C.

The Dayton Thorobred Picker performs with top efficiency at low cost. Patented symmetrical loop construction holds picker in correct contact position. Picker stick hole is designed for correct shuttle contact, eliminates striking at an angle.

Dayton Rubber

Since 1905

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

Shorts and Remnants

Time Draws Near for The Greenville Show

For several months now we have reminded mill men and suppliers of the forthcoming 17th Southern Textile Exposition (The Greenville Show). The dates: October 6-11.

According to President James H. Woodside of Textile Hall Corp. all available space has been contracted for by more than 240 exhibitors. He pointed out that this year the exposition should be the greatest ever held as approximately 10,000 sq ft of exhibition space has been added since the last show through the construction of a new brick building on the property.

Detailed information about the show, along with a list of exhibitors, their booth numbers, representatives to attend, etc., will appear in the September issue of TI. Watch for it. We believe we have a treat in store for you.

Reprint Article in Book

". . . . am revising the McGraw-Hill book entitled 'Tricot Fabric Design' . . . . for distribution to our students . . . . should like to have your permission to include in book a copy of the article 'Cotton in Tricot Knitting' by Lyle H. Hessler and Herbert E. Kieke, which appeared in April 1951 issue of TI. . . . "

JAMES MacDONALD, Jr.
Head
Knitting Department
A. French Textile School
Georgia Institute of Technology
Atlanta, Ga.

► Permission granted.

The Viewer

"In the May issue of TEXTILE INDUSTRIES there is a fine article on page 109, 'Mill-Made Ultra-Violet Viewer.' We think it would be of use to us even though the article speaks of dyed grounds. If you know of some plant in this district that has one . . . "

B. RAFFANTI
Supt. Printing
Riegel Textile Corp.
Ware Shoals, S. C.

". . . on the mill-made ultra-violet viewer, would you be kind enough to forward the specifications of the argon vapor lamp described in this article . . . "

H. BERKOWITZ
Purchasing Dept.
United Merchants and Mfrs., Inc.
New York.

► Type lamps mentioned are manufactured by GE, according to the author of story.

Terry Weaving

". . . appreciate your sending me three reprints of the article, 'Practical Terry Weaving and Designing,' by T. Hargreaves. . . "

A. E. McKENNA
School of Textiles
Clemson, S. C.

► Sorry, no reprints are available. Permission granted to reproduce article for student use.

From '50 Issues

". . . be obliged if you would send us three copies of your article 'Review of Literature on Neps' as published in the January 1950 issue and 'Mill Performance Charts' in October 1950 issue . . . "

J. M. SCHAEFER
Industrial Dept.
W. R. Grace & Co.
New York

Why Do People Write for Publication?

Why do people want to write for publication? Is it the incentive of wealth?

The great Dr. Johnson said that "No man but a blockhead ever wrote except for money," but while authors do usually expect some compensation for their effort, it is well known that the number who become rich is certainly not great.

Money can hardly be the answer. Perhaps it is a desire for fame—or more likely it is an inner compulsion, "an incurable itch for scribbling (which) seizes many and grows inveterate in their insane breasts," as Juvenal, the Roman satirist, wrote.

It must take some such inner drive to hold even the great writers to their tasks, for fundamentally writing is word-smithing, and it is as hard and grueling an undertaking as one can find. Those smooth flowing sentences, so easy to read, are not achieved without profound effort.

Even in prose, the accents of rhythm, of which the reader is usually quite unaware, have been felt, and suffered, and hammered into shape by multiple revisions until the sentences have the earfilling grace which the author seeks. In really good writing, the reader moves over these easy phrases totally unaware of the effort that has been put into them. Christopher Morley calls it "the art of concealing the art."

Look at some of the great manuscripts on display in the museums if you would see for yourself how such writers as Lewis Carroll, Stevenson, Dickens or the modern writers like Sinclair Lewis have struggled. The many elisions, additions and revisions often completely fill the margins and interspaces of the sheet.

Even as great a writer as Kipling was not talking wholly tongue-in-cheek when he warned would-be writers to "Bribe, murder, marry, but steer clear of ink," and very likely he meant more seriously than the wonderful puns indicate, his closing words of that delightful bit of verse:

"There may be silver in the 'blue-black'—all I know of is the iron and the gall."

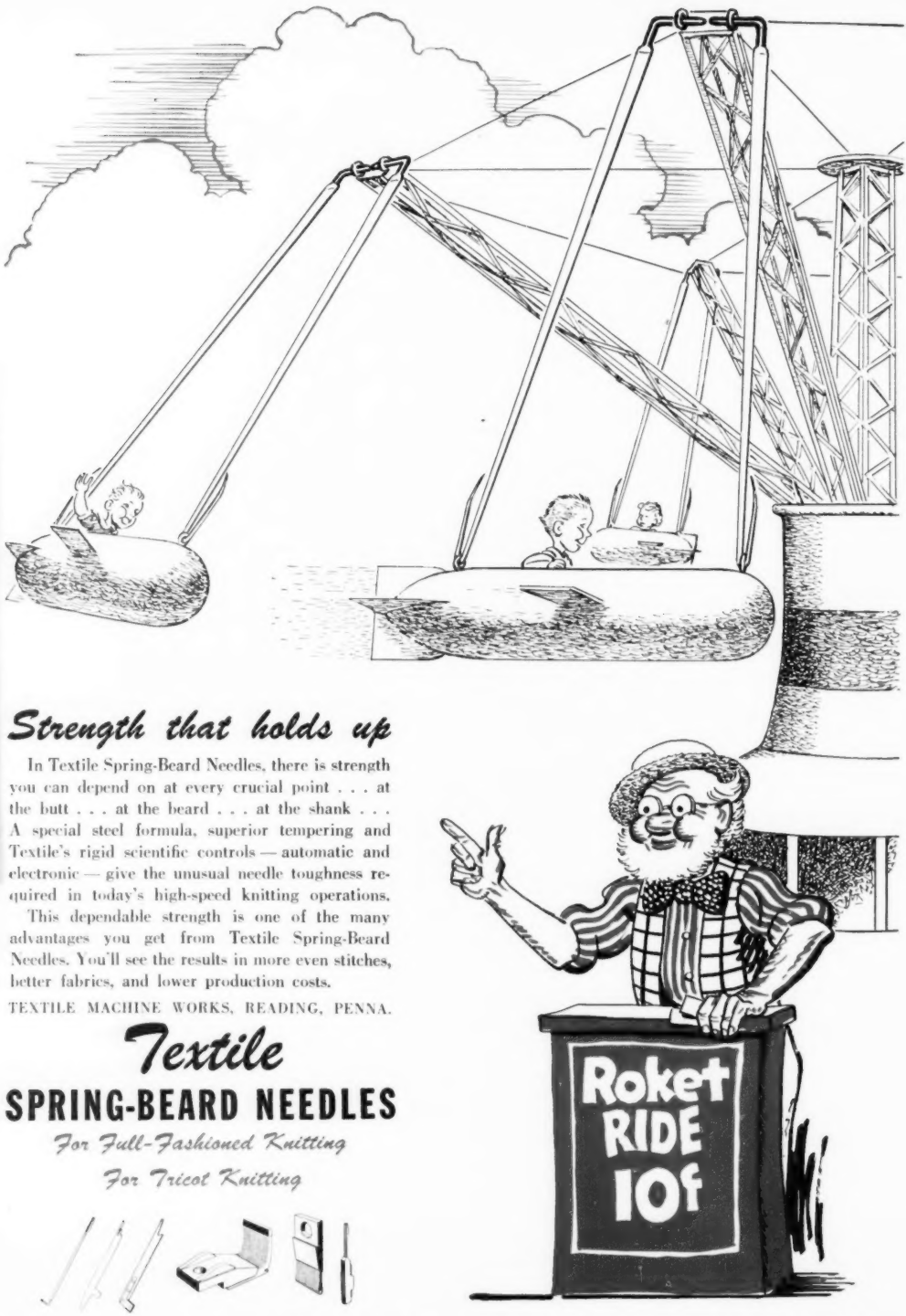
- - - Silicate P's & Q's
Philadelphia Quartz Co.

Few technical writers for TI have retired on their proceeds. Although authors for business publications might find full-time writing pay a bit on the shy side, they will discover that when they know a subject well enough to write the story without having to track down all the facts, it is a lucrative pastime and an interesting hobby. Experience indicates that authors on textiles serve themselves well for the long trend, and they are contributing knowhow to their fellow textile associates—a service that has made American textiles great.

Did it ever occur to you how far back our industry woud be if no one ever wrote an article and there were no business publications by which to disseminate the information?

A technical publication in its field extends the idea of valuable mill visitation and open forum discussion meetings.

Yes, you can serve your industry by publication of your mill experience findings. By serving your industry you serve yourself.



Strength that holds up

In Textile Spring-Beard Needles, there is strength you can depend on at every crucial point . . . at the butt . . . at the beard . . . at the shank . . . A special steel formula, superior tempering and Textile's rigid scientific controls — automatic and electronic — give the unusual needle toughness required in today's high-speed knitting operations.

This dependable strength is one of the many advantages you get from Textile Spring-Beard Needles. You'll see the results in more even stitches, better fabrics, and lower production costs.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

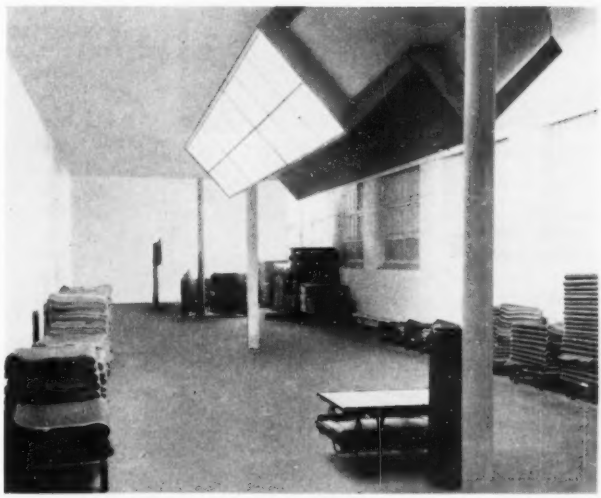
For Full-Fashioned Knitting

For Tricot Knitting

Textile Industries
for August 1952

Color Shading and Grading

Comes of age at Lane Cotton Mills



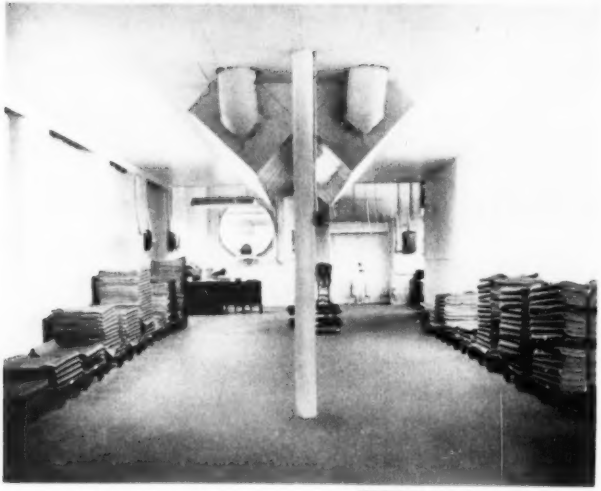
Controlled artificial illumination can serve as a useful tool for color grouping of textiles.

By **WARREN B. REESE**
Macbeth Corporation
Newburgh, N. Y.

TEXTILE COLOR quality control begins but unfortunately does not end in the dyehouse. Even though the dyer has carefully established his dye formula by the critical visual color matching method under ideal artificial daylight lamps, there are color variations in the production run due to such factors as dye exhaustion, finishing variations, temperature changes, fiber variations, pH changes, and a host of others.

To assure the detection and correction of production color variations before they get beyond control, color-corrected illumination should be employed at the key textile perching and inspection operations. In this manner, reasonable control of the color variations in the end product can be established and maintained.

However, depending on the color and type of material, it is often necessary to further improve color quality and assure customer color acceptance by grading the material and placing it into lots of uniform color. This important color operation can be carried out most efficiently and consistently under artificial daylight illumination. Good color control throughout will not in many instances eliminate the desirability of color grading the production, but it will certainly



COLOR SHADING ROOM at Lane Cotton Mills (above) is open at both ends, and artificial North Sky daylight illumination is provided by the two banks of lights inclined at an angle and suspended from the ceiling.

ACCURACY IN SHADING is assured by correct illumination. Harris Barrios, assistant overseer, examines cloth in the shading room.

materially reduce the resultant number of grades or shades. A practical example of how controlled artificial illumination can serve as a useful tool for the color grading of textiles is illustrated by the Lane Cotton Mills story.

Shading Room at Lane. In the face of a highly competitive market the management of the Lane Cotton Mills in New Orleans, searched for a way to improve color quality and still reduce production cost. A completely artificially illuminated shading room was built (see accompanying illustrations).

The shading room is open at both ends and is illuminated with artificial North Sky daylight produced by two banks of Macbeth Daylight Skylights which are inclined at an angle and suspended from above. Each bank of Skylights consists of three six-foot units making a total of six Skylights. A false ceiling was built in and is painted white. The two walls are a light neutral gray. The windows have been opaqued and no other source of illumination is present or can enter the shading room.

The production to be shaded enters at one end of the shading room and is divided in half and moves down each side of the room. The shaded material moves out of the opposite end of the room into the shipping department. Two shaders, one working each side of the shading room, shade approximately 65,000 yards together per shift. The shading room is currently being used two shifts per day, and approximately 130,000 yards are shaded daily.

The shaders prefer the artificial daylight because the illumination duplicates natural daylight and is uniform and consistent from hour to hour and day to day, regardless of weather conditions. Furthermore, the late shift is not hampered by trying to shade in the waning hours of natural daylight and then having to complete the work under whatever general illumination is available. The shading done by both shifts in the Lane shading room is the same because the work is done under identical conditions for seeing color.

The artificially daylighted shading room at the Lane Cotton Mills has been in operation for approximately ten months. During this period, the shading for quality, with special reference to uniform shades, has shown marked improvement. Labor savings have been realized principally because shading has been carried on regardless of the weather. Prior to the installation of artificial daylight illumination, color shading operations were suspended on dark,

cloudy days, and the installation has facilitated the movement of materials. Color shading operations are no longer restricted to the North side of the plant along side of windows but may be located and designed to expedite material handling.

The Lane story points out many possibilities for better textile color quality control through controlled illumination. It may also bring to mind the question: "How can the simple mechanism of light improve color quality control?" This question may be answered by pointing out the underlying principles as well as indicating the relationship of light and color.

Light and Quality Control. The production of precision metal parts, for example, requires quality control. The instruments and tools used to measure production variations do so with much greater accuracy than is required in the tolerances permitted in the end product. This seems logical because variations must be critically detected early in production and corrected to effect reasonable variations in the final product. This type of quality control is analogous to textile color quality control.

The best practical instruments we have for the detection of color differences and color variations are the experienced eyes of the dyer, shader, and inspector. Correspondingly, the color acceptance or color rejection by the customer is based upon his visual color evaluation. Therefore, the human eye is the limiting factor in color control and determines the color differences and variations which may be tolerated. However, the eye is a complicated mechanism which sees the sum total called "color" as the combination of the color of the material, the type of light used to illuminate the sample, the weave and texture of the material, and other psychological factors.

In order to most effectively employ the human eye as a color quality control mechanism, ideal conditions for seeing color must be given adequate consideration. The most important single factor in seeing color other than the basic color of the material itself is the type of light used to illuminate the sample.

As an example of how light affects the way we see color, let us consider the extreme case of a deep blue sample and a ruby red source of light. The eye will see the blue sample under the red light as a dark gray, nearly black. The red light source has little if any blue light in it. Consequently the blue sample does not reflect any appreciable amount of blue light into the eye, but the sample does absorb most of the red light. The sample, therefore, appears to lack color and appears dark gray.

On the other hand, if the sample is viewed in daylight it will appear blue.

We cannot say the eye is in error just because it is properly responding to the given conditions for viewing color. This example merely illustrates that the color of the sample must also be present in the light source in order to be perceived by the human eye. Consequently, *color* appears the way you see it, but the way the *color* appears depends upon the way you *light* it.

Artificial Light. In considering an artificial light source for color work, one must be careful that all colors are present in the source in the correct proportions and relationship, otherwise difficulty may arise where certain color differences will be difficult to detect, and other color differences may be magnified out of proportion. The proportion and relationship of the colors present in a light source are known as their *spectral* (color) *energy distribution.*

What dictates the spectral (color) energy distribution of an ideal artificial light source for visual color work? Generally speaking, our eyes have physiologically evolved about natural daylight, and the color memory and color experience of trained colorists have been gained while using North sky natural daylight. Therefore, an artificial source of light for color work should duplicate as closely as possible these ideal lighting conditions for seeing color in order to make use of the colorists' color memory and color experience.

To ascertain how well certain types of artificial light sources duplicate the ideal North sky natural daylight, it is necessary to compare graphs which show the proportion and relationship of the colors present in each light. Each graph consists of a curve which represents the spectral (color) energy distribution for a specific light source. The curves are obtained by scientifically measuring

Washable Fabric of Wool-Cotton Blend Made by Woolen System

After a year of experimenting in combining animal and vegetable fibers, an Oregon woolen manufacturer has produced what he terms the first American-made washable fabric woven on the woolen principle, and is tailoring it into outdoor and leisure wear shirts. The washable character of the material is said to result from the combination of Pacific Northwest virgin wool and selected Arizona Pima cotton.

The new fabric is made by the Wahkeena Company, a subsidiary of the Pendleton Woolen Mills of Portland, Ore. It is distributed by a separate company, the announcement said, to avoid any confusion with Pendleton's reputation for 100% virgin wool materials.

"The Wahkeena Company," Clarence M. Bishop, its president said, "in its experiments found that 50% of fine Pacific Northwest Merino type wool when combined with an equal proportion of the Pima vegetable fiber from the Southwest, gave us the strength, fine spinning qualities, and lightness in weight required for easy washability that no American-made fabric heretofore had to offer in competition with the imported washable shirts.

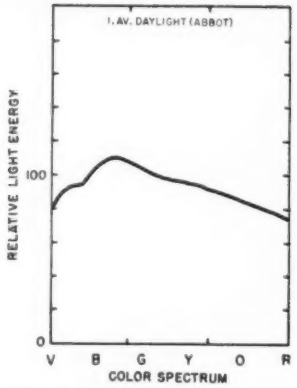


FIG. 1. Characteristic spectral (color) energy distribution curve for *natural daylight.*

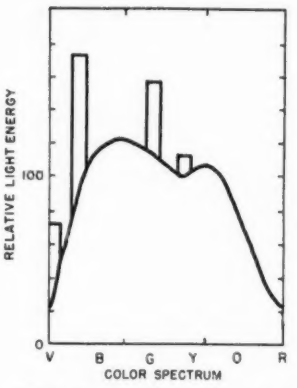


FIG. 3. Characteristic spectral (color) energy distribution curve for *daylight fluorescent* tubes.

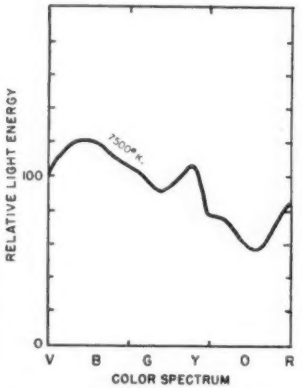


FIG. 2. Characteristic spectral (color) energy distribution curve for artificial light used at Lane. Called *North Sky daylight,* the light is obtained by using special daylight conversion glass filters over incandescent bulbs.

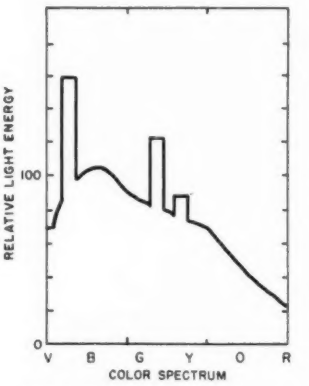


FIG. 4. Characteristic spectral (color) energy distribution curve for Examolite type of color-corrected fluorescent light, obtained by using a mixture of daylight fluorescent and blue fluorescent tubes with incandescent bulbs.

and plotting the amount of light energy present in a given light source for each wave length or color throughout the visible color spectrum. In other words, we can tell from these graphs what we cannot see by directly looking at the light source itself, namely, the actual breakdown of the light into its various colors and color components.

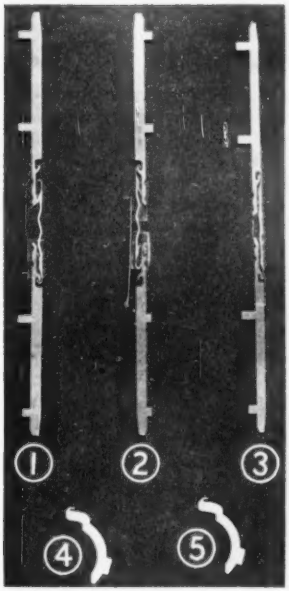
Figure 1 shows the spectral (color) energy distribution of ideal *Natural Daylight.* Figure 2 shows the spectral (color) energy distribution of *Artificial Daylight* lamps such as those being used at the Lane Cotton Mills and which are in extensive use today. Figure 3 shows the spectral (color) energy distribution of so-called *Daylight Fluorescent* light. The artificial daylight shown in Figure 2 is the closest duplication of ideal natural daylight (Figure 1) commercially available. The proportion and relationship of the colors in both sources are similar.

Fluorescent daylight (Figure 3) however, when compared to natural daylight is deficient in red and blue and has a concentrated amount of light energy in so-called spectrum (color) lines which are indicated by the vertical bands in the violet, blue, green, and yellow portions of the color spectrum. It is these color deficiencies and defects in fluorescent light which minimize the appearance of certain color differences and magnify or accentuate others and render this source of illumination unsatisfactory for critical color matching, shading, or grading.

Color Correction. Fluorescent light can be color-corrected so that it may be used for the illumination of less critical textile color operations. A color-corrected fluorescent source known as the Examolite was introduced about two years ago. Figure 4 shows the spectral (color) energy distribution of the light produced in the Examolite where daylight fluorescent tubes, blue fluorescent tubes, and incandescent bulbs are used in the proper combination within a single mixing chamber. The resultant light mixture produced by this combination is much improved over straight fluorescent light but is not as close to the ideal (Figure 1) as the artificial daylight lamps (Figure 2).

It is clear from this type of light analysis that light sources have distinct characteristics. These characteristics may be good or bad, depending upon the use to which the light source is put; whether it be general illumination in the home, store illumination, plant illumination, or illumination for operations involving critical visual color evaluation. Light is no different from any other industrial tool, and it should be selected according to the job requirements.

In considering color, we must accept the fact that visual color matching and grading is an art which is indispensable, and there is no substitute. Actually, human error in this work is a very small factor when compared to improper illumination. We cannot insist on the continual raising of standards and the improvement of human performance until the other more variable factors are reduced to a constant. Careful attention to the proper standardized lighting for textile color operations may be repayed many times over by better color quality control.



SLIDERS control needle action and take care of up and down transferring operations, which are just as important as knitting. If sliders are not uniform, trouble soon develops. In photo are: (1) 24 gauge sliders with needle being controlled by slider in lower cylinder; (2) 24 gauge sliders with needle being controlled by slider in upper cylinder; (3) 48 gauge sliders with needle hooked to sliders in both upper and lower cylinders; (4) 48 gauge Komet sinker; (5) 24 gauge Komet sinker.

Warning for circular knitters!

Dangerous Machine Upkeep Practices

By RICHARD CARTER

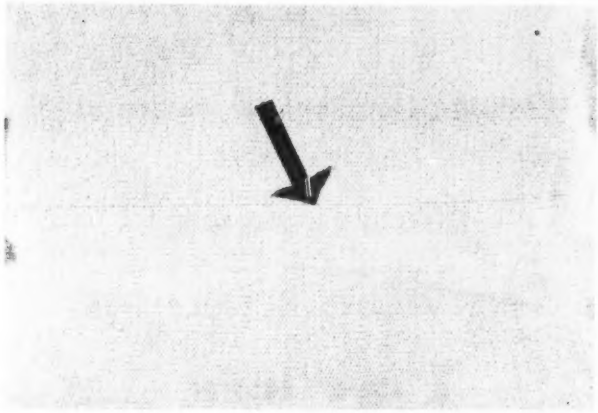
SOMEONE wisely said that we learn by our own mistakes or the mistakes of others. In my opinion the latter is the most profitable way to learn. Many dangerous practices in circular knitting mills result from carelessness, lack of experience, taking chances, or trying to save a dime by spending a dollar.

Needles. One of the expensive items necessary to keep production up in any knitting mill is needles. The way needles are used or abused is dependent upon the knitting department superintendents, foremen, and fixers. Machines kept in good condition and properly lubricated will use fewer needles; therefore needle cost per dozen will be lower, regardless of where the needle supply is purchased. Simple production test runs will help to determine which of any given make of needles will give best results in any make of machine.

Some mill men may prefer to purchase needles from two or more needle makers. The author finds no fault with such a practice and does not question their judgment. The dangerous practice is to mix what are supposed to be the same kind of needles from different makers in the same machine.

Mixing needles can cause vertical streaks, wavy knitting, and numerous other kinds of knitting troubles. We feel that it is unfair to the needle makers to mix needles. If what we have said seems unreasonable, ask any machine fixer how he feels about this problem. The problem does not involve the quality of needles pro-

NEEDLES are a necessary expense in keeping production up in any knitting mill. Simple production test runs will help to determine which of any given make of needle offers best results in any make of machine for a specified type of work.



STREAKS, lines, or other faulty work may be caused by mixed sliders in plain knitting. Arrow points to streak caused by mixed sliders.

duced by large or small manufacturers, but it does embrace the wisdom of mixing needles. Mixing needles does not help the needle makers, and it does hurt the mills in many ways.

Sinkers. Sinkers, like needles, are important in helping to produce good fabric. High quality sinkers can be purchased from a number of suppliers, but in most instances mixing sinkers will cause trouble. Open wales, vertical lines, and streaks, plus heel and toe knitting troubles, can be caused by mixing sinkers.

Certain makes of machines are likely to cause more trouble than others, due to closer tolerances necessary in the process of manufacturing. Much depends on how well sinkers are tempered. It is advisable to run tests which will help determine which make of sinkers will give best all around results.

Sliders. Now we begin to tread on more dangerous ground, for sliders themselves do not knit. They simply control needle action during all knitting operations, and in addition to that, they also take care of all up and down transferring operations. The latter operation is just as important as knitting, and in the event that sliders are not uniformly made, much trouble can and will develop. This is especially true on machines where transferring up and down goes on continually while patterns or designs are being made.

Through the years patents have prevented some types of sliders from being made except by certain companies. This meant that sliders had to be mixed if they were purchased from different sources. However, we are told that now the twenty-seven different kinds of sliders necessary to fill one special rib machine can be purchased from a number of sources.

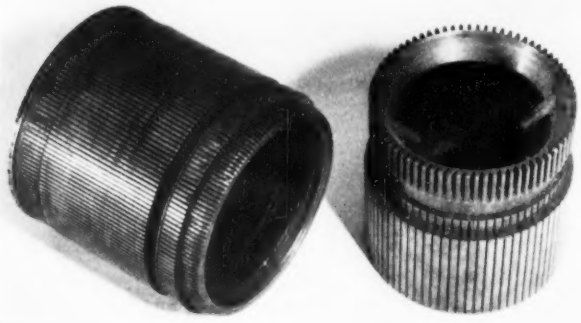
Any mill man may buy sliders from any source he chooses, but by choosing wrong he is inviting trouble. If actual running tests should prove that newer sources of supply can make superior sliders, then by all means buy those which give best results.

We have mixed two or three different makes of sliders in one machine and checked the all around results carefully. In some instances trouble developed immediately. In others it took weeks for trouble to show up. We still believe that sliders should not be mixed if it can be avoided. It is the only way each supplier can be treated fairly.

Anyone familiar with close adjustments necessary in controlling the action of sliders during the transferring operations knows that any variation in dimensions of sliders can cause plenty of trouble. Friction on sliders is important, and machine fixers become accustomed to controlling friction when sliders are changed or replaced for any reason. Using several makes of sliders makes it more difficult for machine fixers to keep this uniform friction. For these and other reasons too numerous to mention, we feel that it is dangerous to mix several makes of sliders in one machine.

Needle Cylinders. In many mills it is not uncommon to change both knitting and rib machine cylinders to meet seasonal changes in production demands. In some instances, mills can secure additional orders by increasing their pro-

NEEDLE CYLINDERS must be correctly made. In some instances it may be necessary to purchase additional cylinders in coarser or finer gauges than those on the machines. In being expedient, one man bought some cylinders which turned out to be too soft. They were returned to the maker to be heat-treated, but when they were installed on the machines the second time it was found that the cylinders were warped. Someone lost some money on the deal.



duction of certain lines, which may make it necessary to purchase additional needle cylinders in coarser or finer gauges. Such equipment may be purchased from machine builders. However, there are other sources of supply, and we know of some which make satisfactory cylinders. We also know of some who do not. It's up to the individual who has the responsibility to order such equipment to purchase only where the best price and quality and delivery can be obtained.

We know of some instances where a dollar was spent to save a dime. Let us relate just one. A fellow mill man, whom we know well, needed some knitting machine cylinders in a hurry, and placed his order with his regular source of supply. He was promptly advised that it would take at least thirty days or more beyond the delivery date he asked to fill his order. He cancelled the order and ordered from another source of supply. His cylinders came on time, and he proceeded to put them into operation on his machines.

All was well until he began to knit. Machines began to jam, needle butts were bent and broken, and he was in real trouble. Machine fixers told him the walls on those cylinders were too soft. They called the makers and were told to return the cylinders for heat-treating. This was done and when the cylinders were returned, they were put back into the machines.

Now all should have been well, and lo and behold, the stew had thickened. The cylinders became warped in the heat-treating process; they were absolutely useless. Someone lost some money and the mill lost some business. This is not a dreamed up tale; we saw the warped cylinders and got the information first hand from the man who had the bad luck—or was it bad luck? These things do not happen every day, but they can happen. We who order such supplies must take every precaution to get dollar value when we spend the mill's money.

Conclusion. What we have written may sound like we are strictly against the small manufacturer or a large one who feels he is equipped both in machine tools and know-how to fill orders. Quite the contrary is true. We feel that any concern having the necessary know-how and equipment to produce machine parts of any kind without violating any patents is entitled to a share of such business. If they can produce such items at a sufficiently lower price and keep the quality of their supplies up to par, they are entitled to get every order they can fill.

Whether or not the mill man gets what he pays for is entirely up to him. He has to live and get along the best he can with the stuff he buys. Constant checking and testing is vitally important; we are constantly looking for something new, something better. Sometimes it costs more in the beginning but it pays off in the end. Sometimes it is cheaper in the beginning but mighty expensive in the end. You, Mr. Mill Man, are the judge; we have simply sounded a warning bell.

Textile Industry Accident Frequency and Severity Rates Decrease in 1951

Operatives employed by member companies of the National Safety Council had fewer accidents in 1951, but the mishaps they did have were more serious.

Industrial injury rates for last year, released by the Council in advance of the 1952 edition of its annual statistical yearbook, "Accident Facts," show a modest reduction in frequency but an equal increase in severity of 1951 accidents as compared with 1950.

Twenty-seven of the 40 basic industry classifications reduced their frequency rates, and 20 reduced severity rates.

The accident frequency rate for employees in all industries submitting company reports to the Council, based on the number of disabling injuries per 1,000,000 man-hours, was 9.06 in 1951 or a reduction of 3 per cent from the year before. The rate for the textile industry was 6.89 or an 11% decrease from the 1950 rate.

The accident severity rate for all industries reporting to the Council, based on the number of days lost per 1,000 man-hours, was .97 last year — an increase of 3 per cent from 1950. Severity rate for the textile industry was .47—a decrease of 23% from 1950.

Speaking on "Small Business Safety" before the President's Conference on Industrial Safety recently in Washington, D. C., Ned H. Dearborn, president of the Council, stated in part:

"The employees of the 100-man or smaller plant still have about two-thirds of all of the occupational injuries suffered in this country each year. The small members of the National Safety Council still report injury frequencies about two and a half times on the average higher than those of our large members, with the medium organizations — those between 100-500 employees — showing about twice the big-plant rate. . . .

"I am inclined to believe, if we are to develop voluntary programs of accident prevention in the smaller industries, that our best hope lies in the industry associations. . . and I believe that, if we should concentrate our time and attention on helping associations help their members, safetywise, we shall be much closer than we have ever been toward justifiable frequency and severity rates in the field of small enterprises.

"I trust we can find many other ways to get the small employer to see his problem and, having seen it, to make a reasonable effort to solve it himself. For safety is a job an employer has to do for himself. There are not enough safety engineers, enough inspectors, enough supervisors on earth to do the job of controlling unsafe conditions and unsafe work practices in 175,000 small organizations, even if their managers were willing to contract for their services and had the money to foot the bill."

INFORMATION RACKS contain booklets of interest to employees. Subjects may cover fishing, hobbies, gardening, or economics and politics. Light reading goes the quickest, but over a period of time all literature is taken.

Information Racks Provide Helpful

FOR THE PAST year we have made available to our employees information in booklet form which is of direct interest to them. Subjects of the individual books range from "How to Save Money on Food" and "The Home Work Shop" to "Seed and Vegetable Catalog" and "How Much Profit Should a Business Make."

The printed literature is not mailed to the employees; it is available to them and is for their selection from information racks suitably located for their convenience. We have found that the best stations for the racks are on stair landings or where the outgoing shift operatives can pick the literature up on their way home.

Cartoon, comic booklet, and health materials go fast, with the "How To" series running a close second. Not all of the heavy reading is taken immediately, but over a period of time we find that *all* types of literature in the racks have good circulation.

Only favorable reaction has come from our employees on this service furnished by the company; however, the best indication that we get is the speed with which the racks become empty. It is a worthwhile project.

Cost of the service to our plant, which has 1450 employees, is slightly over two thousand dollars annually.

Operating the System. The booklets are sent to us every ten days by the National Research Bureau, Inc., which also serves one thousand other industrial organizations. Thus, a fresh supply of booklets is always on hand. Any literature which has not been picked up by the employees may be returned to the supplier.

Since the booklets are designed as self-help information for the employee—not the employer—we feel that anything which helps our employees to maintain a better standard of living and assists them

LOCATION OF RACKS is important. They should be where employees can scan new booklets. Stair landings or near exits are convenient places. Servicing the racks requires the time of one person for half an hour, twice a week.

Service to Huntsville's Employees

By A. D. ELLIOTT
Vice-President and Manager
Huntsville (Ala.) Manufacturing Co.

in understanding the economics of life and the problems of management, will help everyone.

A preview of the literature reaches us 30 days in advance of the actual copies for the racks; sometimes we find it helpful to pass the previews along to our supervisors and key men so that they will be posted. Otherwise an employee might spring a question on the supervisor which he is not prepared to answer, because very often the contents of the booklets are discussed among the employees and with the supervisors and management.

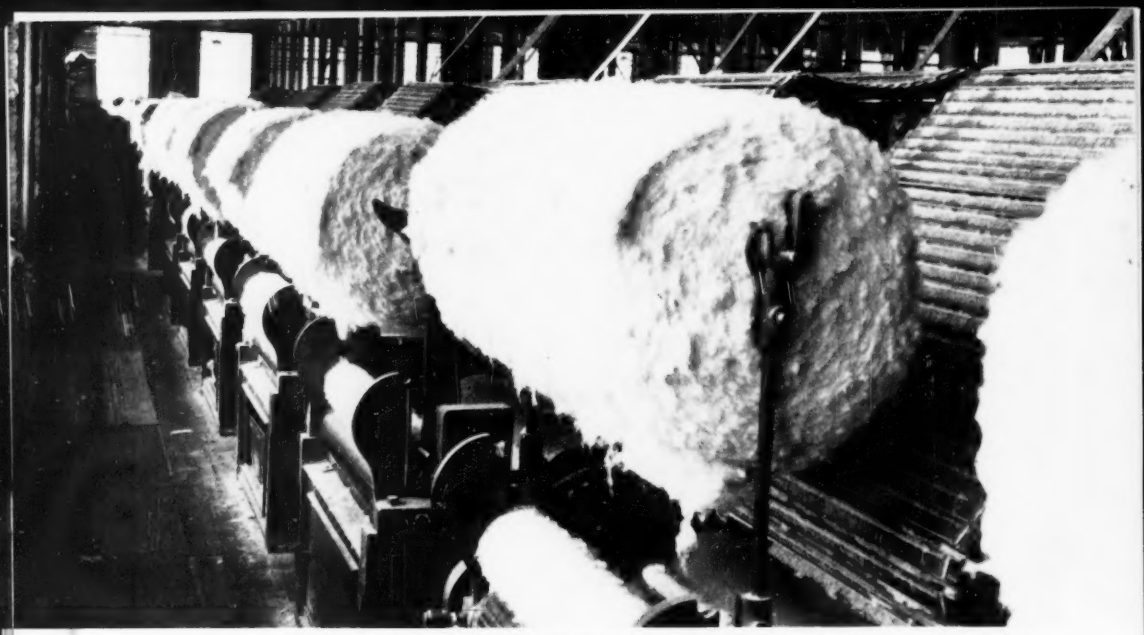
We have found that nine subjects per month, or about three subjects every ten days, provide the best balance for distribution of the literature. A typical example of two consecutive 10-day distributions would run about as follows:

First 10-day literature—baits to use for fishing, home dressmaking, and hidden taxes; second 10-day literature — interesting hobbies, value of loyalty to the company, and preparing fresh vegetables.

About half of the booklets are prepared in two colors and half in one color, both on medium priced paper stock. The helpful information is being offered, not the beauty of the books or expensive covers.

Subjects for the information racks are pre-tested before they are sent to us by the supplier. We do not govern the subjects and wouldn't want to—sometimes subjects selected by management could be objectionable to employees.

Our employees know that we are not just trying to distribute propaganda to them; the subjects are of real interest and assistance to them, and they like the service rendered by the company. If they didn't they could pass by the racks and leave them full.



CARDS CAN'T DO IT ALL! Even though the cards are in excellent mechanical condition—lickers-in, bearings, screens, clothing, etc.—a good lap from the picker is still essential in making even sliver.

Card Sliver Variation Can Be

Observations from experience reveal some indicative relationships between sliver variation and components of the card.

By HENRY PAUL

AN IMPORTANT prequisite in making even card sliver is a uniform picker lap. Without a good picker lap it is impossible to make uniform card sliver, no matter how perfectly the cards are set or whether the clothing, lickers-in, and bearings are in perfect condition.

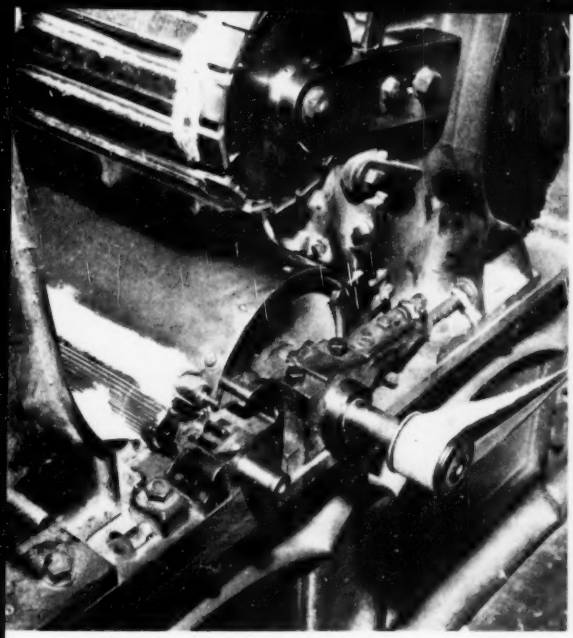
Assuming that the picker laps are within standard tolerances, there are several important considerations which may help control the uniformity of the card sliver.

Card Feed Rolls. If feed roll bearings or shafts on the card are worn, weight cannot be applied uniformly to the roll, and the lap will be fed to the licker-in in alternately thick and thin pieces, thereby producing lumpy sliver. Unevenly distributed weights on feed rolls also cause uneven feeding and lumpy sliver.

Feed roll bearings should be replaced if they do not fit snugly to the shaft. Worn feed roll shafts should be replaced or built up and machined to the proper size, and feed roll weights and lever arms should be thoroughly checked each time the cards are ground and set. Feed rolls and weights are often the most neglected part of the card.

Clothing. Dull card clothing or clothing loose on the cylinder or foundation has tendency to load excessively and causes a wide range of sliver weights between stripping cycles. Continuous strippers help to prevent loading, but loose clothing will load and streak the flats although the stripper may be functioning properly. All card clothing should be examined periodically and repaired as soon as a defect is found.

Dull or rusty flats also become



FEED ROLLS, shafts, and bearings must be kept in good condition. Unevenly distributed weights on feed rolls cause uneven feeding and lumpy sliver. Weight cannot be applied uniformly to worn shafts or bearings.

FLATS play an important role in producing good carded work. Damaged, rusty, or dull flats become loaded easily and cause sliver variation. After grinding, check carefully for correct relationship between heel and toe.

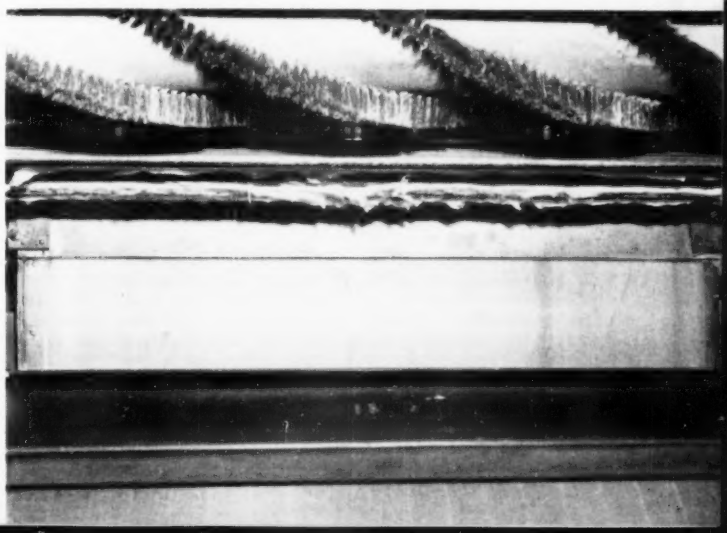
Reduced!

loaded easily and cause variation in the sliver. After the flats are ground, they should be checked carefully to maintain the correct relationship between heel and toe. If the grinding drum is not set properly, or if the flat holders are worn, the flats may be ground in a wedge shape, thereby spoiling the heel and toe alignment. Poorly ground flats allow lumps to pass on to the doffer, thereby producing uneven sliver. Licker-in clothing should be sharp and uniform over the entire surface. High and low places on a licker-in prevent accurate adjustment and allow lumps of fibers to reach the cylinder.

If the stock is not properly broken up by the licker-in, the fibers cannot be separated properly by the action of the flats and the cylinder, and the web will contain thick and thin places. A good sharp licker-in, correctly set, is essential to good carding.

Screens and Bearings. If screens are in poor condition, or if they are not accurately adjusted, too much or too little waste may be extracted from the cotton. If screens are broken or damaged, the stock may hang up on the rough places until it drags the cylinder and is plucked off and placed on the doffer. Screens that are not set the same on both sides may

DULL CARD CLOTHING or clothing loose on the cylinder or foundation has a tendency to load excessively, as shown in this photo, and causes a wide range of sliver weights between stripping cycles. Note damaged places on clothing caused by looseness.



allow thick and thin places to go through and into the sliver. Also an improperly set screen interferes with air currents which play an important part in removing waste from the stock.

Feed roll, licker-in, doffer, cylinder, and calender roll bearings should be in good condition—free from wear, clean, and adequately lubricated. Otherwise it is impossible to maintain uniform and accurate settings which are necessary for good carding.

A regular stripping schedule is necessary to maintain uniformity if stripping is done manually. Any variation in the stripping cycle will affect sliver uniformity. Alternately short and long stripping cycles cause the sliver to run correspondingly light and heavy.

Humidity and Tensions. Excessive variation of humidity in the card room adversely affects sliver weight. If humidity is high, an excessive amount of strips will be removed from the cotton, and it it too low, the amount of waste removed will decrease, thereby affecting sliver weight. Humidity should be kept as uniform as possible at all times. Low humidity may permit the web or lap to split.

Too much tension between coiler and doffer often stretches the stock and affects sliver weight proportionately. Tension between coiler and doffer should be just enough to keep the end up without stretching the sliver.

Fronts of the cards should be kept clean and free from dirt and oil, especially around the sides and under the front of the doffer. On dirty cards the web may get caught on oily lint, and part of the stock will be deposited on the floor as waste, and the remainder produces a light end.

Cards must be carefully maintained and adjusted if uniform sliver is to be produced. It is necessary for the grinder to exercise care and grind and set each card on a regular schedule, and between grindings he should be on the alert for the forementioned causes of sliver variation.

Performance Standards for Rayon, Acetate, Mixed Fabrics

The American Standards Association has approved 51 performance standards for rayon, acetate, and mixed fabrics in various end-uses.

Developed by the work of 30 national organizations participating in the rayon-acetate project, the standards provide tests and specifications for laundering, washability, shrinkage, colorfastness, flammability, and other points, the announcement stated.

By definition in the new standards, the term *rayon* and *acetate* includes all fibers deriving from a cellulose base, regardless of manufacturing process. The terms *rayon, acetate* and *mixed fabrics* refer to fabrics containing more than 50 per cent of rayon or acetate fibers. The balance of the fibers may be nylon, "Dacron," cotton, wool or any of the new fibers coming into use in textiles.

The fabrics covered include those for women's and girls' wearing apparel of 24 end-uses; for men's and boys' wearing apparel in 16 end-uses, such as sports wear, suiting lining and bathing suits. Home furnishings, such as window curtains, draperies, slip covers and blankets, are covered by eleven standards. Woven fabrics and knit fabrics are specified separately.

The National Retail Dry Goods Association, which took the leadership in the project, emphasized from the beginning that the consumer is primarily interested in the serviceability of the fabric rather than in the fiber content. This principle lies at the foundation of the announced American Standards for rayon, acetate, and mixed fabrics.

It is expected that the establishment of these standards will give confidence to the retail buyer, to the fabric buyer for the ready-to-wear industry, and in turn to the consumer. They will know that the goods will be sold on a sound technical basis, the announcement indicated, since the orders can include a requirement that they meet these standards. Sales people in the stores will have concrete information at their elbows to inform their consumers about the goods covered by the standards.

A spokesman for The National Retail Dry Goods Association recently declared: "There is no compulsion whatsoever to use these standards. These standards are voluntary. They are a preventive measure to make unnecessary standards by governmental decree. We must try to be as free as possible in these times when the government has a tendency to supervise our lives from the cradle to the grave."

A plan for the informative labeling and certification of rayon, acetate and mixed fabrics, has been worked out and approved by an ASA sectional committee. While this plan is not to be considered an American Standard, its recommendations are intended to serve as a guide to any organization that wishes to administer it.

Under the labeling plan, each fabric or garment is labeled to indicate how it should be laundered or cleaned.

"Washable" means that an article may be washed at home or in a commercial laundry with any good soap or detergent in a water not over 160 F.

"Hand washable" means that the article may be washed by hand or machine at home or in a commercial laundry with suds of a mild (neutral) soap or detergent. It is particularly emphasized that water not more than 100 F must be used.

"Dry cleanable" means that an article should not be washed but only dry cleaned.

The success of such a certification plan is said to hinge on the integrity, impartiality and thoroughness of the certifying agency.

A subcommittee will be in charge of the preliminary introductions of the standards to industry, commerce, and consumers.

Crease and Soil Resistant Cottons

Survey of retail piece goods trade by National Cotton Council reveals need for research in fields of crease and soil resistant finishes.

THE 20,000,000 U. S. women who do their own sewing used more than 686 million square yards of piece goods last year and nearly 60% of the yardage was cotton.

These findings are contained in a report of the retail piece goods trade prepared by the market-research department of the National Cotton Council. The report is the first authoritative study to be published on the size and importance of this market, the Council says.

Of special interest to cotton textile manufacturers will be the findings regarding research needs or opportunities for cotton.

Crease Resistance. The finishing and dyeing field offers the most research opportunities for cotton in retail piece goods. Trade representatives expressed the almost unanimous opinion that research efforts should be directed to the improvement of crease resistant finishes. They stated that none of the crease resistant finishes available today is entirely effective. The finishes do not prevent formation of creases, but they do cause some of the creases to fall out when the garments are not in use.

Two major objections to present crease resistant finishes were cited; both of them may be solved through further research. Chlorine retention is the first objection. Chlorine causes white materials to turn yellow to the extent that many companies no longer offer white fabrics with a resin finish. Companies which do are faced with constant consumer complaints. Companies which do not offer white fabrics are sacrificing substantial volume. The research need is for a resin finish which will not retain chlorine.

The second problem with resin finishes, as outlined by the trade, is that all fabrics cannot be treated with resins with the same degree of success, yet consumer demand is becoming stronger for crease resistant qualities in all types of fabrics. Some people in the trade go so far as to predict that eventually all cotton fabrics for apparel will be treated to impart this characteristic.

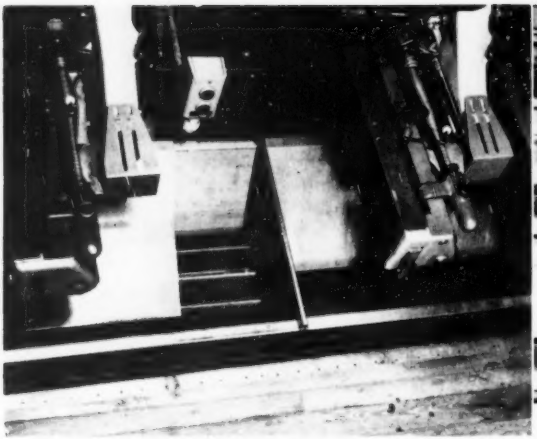
The research need, therefore, is twofold: (1) the usefulness of the present resin finishes should be widened; and (2) other means of obtaining crease resistance should be developed. One member of the trade suggested research on the cotton fiber itself as the most promising field for future development of crease resistance.

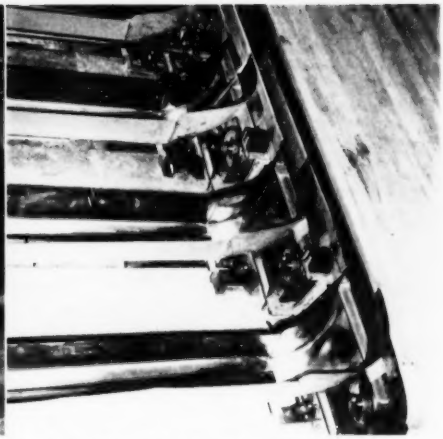
Shrinkage Control; Fast Colors. Improvements in shrinkage control and fast colors, mentioned by some trade members as research opportunities, are believed to be problems of education rather than research needs. Some trade representatives stated that women who sew encounter difficulties with shrinkage and color fading because washability of cotton fabrics is such an important factor. Actually, however, adequate preshrinking processes and fast colors are available and in use. There appears to be little need to advocate more research in these fields.

What is needed is an effective educational program to get consumers to buy pre-shrunk fabrics or to make allowances for shrinkage, and to demand color fast materials. Dyestuff manufacturers state that many of the color fastness objections result from improper end use applications. Women who sew need more information on the subject of color fastness.

Resistance to Soil. Trade representatives called attention to a need for finishes to resist soil. This need was mentioned because synthetic fabrics are beginning to be promoted on the basis of soil resistance. Enough information was not obtained during the survey to ascertain whether an actual research opportunity exists for a soil resistant treatment on piece goods or whether it is merely a promotional matter. Some of the crease resistant finishes used today are said to impart resistance to soil. If they do, proper promotion of this fact might offset the promotions for synthetic fabrics. Tests should be made to determine the relative merits of the soiling characteristics of cotton and synthetic fabrics, however, before any promotional work is initiated in this field.

Copies of the report "Cotton In Retail Piece Goods" may be obtained upon request at The National Cotton Council, P. O. Box 18, Memphis 1, Tenn.





BOBBINS ARE DISCHARGED (left) from spindles into troughs from which they are conveyed to one end of the winder by means of endless belts. Note the partitions underneath spindles. Partitions may be adjusted so that bobbins are deposited into the proper trough, according to different styles of yarn. Bobbins are transferred, at the end of the winder (right), to another series of endless belts running perpendicular to the first. Flock is removed from the conveyor belts by brushes located above the drive pulleys.

S-T-R-E-T-C-H-I-N-G

Automatic Motions to the Limit

Filling winder at Bachmann-Uxbridge now equipped with automatic chalk marker and automatic distribution-delivery system.

Staff Prepared

HOW AUTOMATIC can an automatic machine get? An answer to that might be—the absolute limit is reached when every phase of the operation and the product itself can claim the distinction of having been "untouched by human hand."

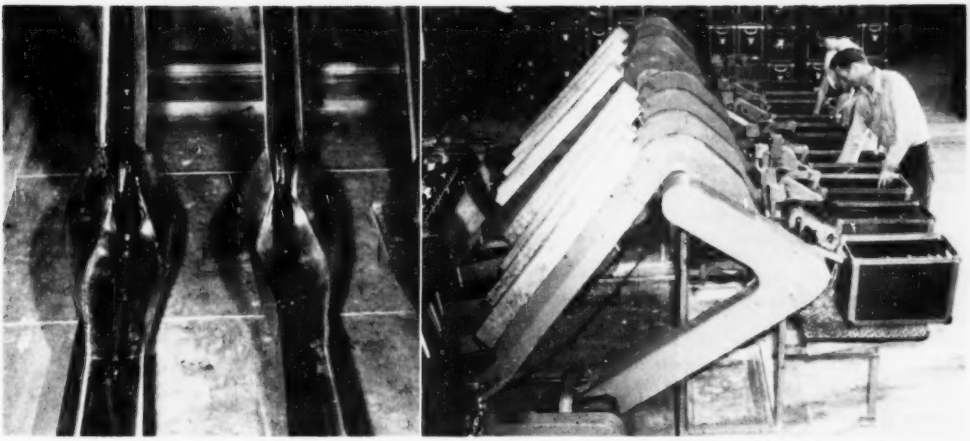
Take the Whitin-Schweiter automatic filling winder, for instance. Here is a machine that involves a minimum of supervision and labor. A review of its functioning would indicate the vast degree to which pure mechanics have supplanted human skills on this machine.

It will feed, wind, and change bobbins. It will catch slubs, cut tails, and if desired, tie broken ends. It will wind bobbins with full control of diameter, traverse, taper, bunch, and yarn tension. Also, there are attachments for waxing yarn or marking bobbins, and it will stop when anything goes wrong.

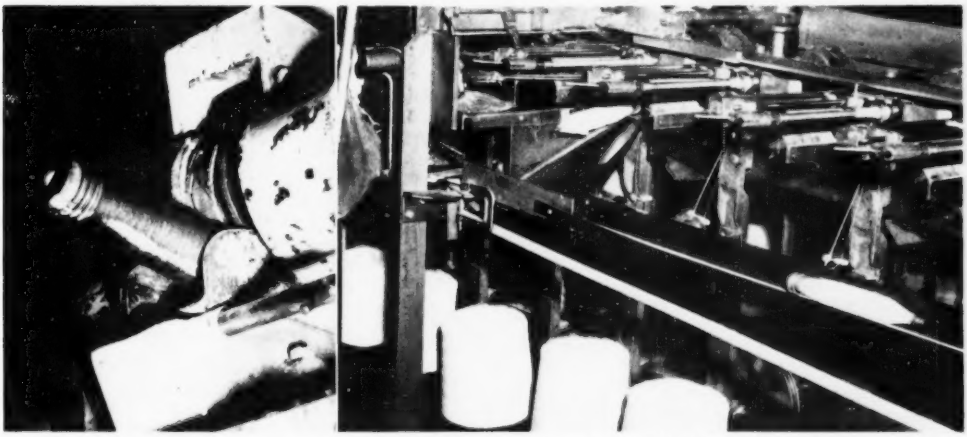
Though this winder approaches full robotism, could it be brought a step closer by any manner or means? And would the cost of the manner or means be justified on the basis of economies or product improvement it might achieve?

Production experts, in concurrence with engineers at Bachmann-Uxbridge Worsted Corp., thought so. In line with Uxbridge's uncompromising policy of ever greater plant efficiency, the mill's development staff accepted the challenge. Their first action was to survey winding operations and related influences on the weave room.

Winding Department. In brief, this was the layout of the winding department: two automatic winders, each composed of four sections



A CHAIN TRANSPORTS BOBBINS (left) individually up an incline leading to the chalking mechanism. If more than one bobbin is in a compartment, the extras are toppled back down the incline into a funnel shaped guide where they can be picked up by an empty compartment. The chalk-marker (right) has eight deliveries, balancing production from the 120 winder spindles. Chalked bobbins are doffed into tote-boxes which fit on trays bracketed to the W-3 looms. Much confusion in handling is eliminated.



CHALKED BOBBIN (left) emerges from automatic chalker head, distinctly marked. Chalk-marker has also been adapted to the Abbott winder. The conveyor arrangement for this installation (right) speeds the flow of goods measurably. The mill's ultra-modern dyehouse also continues the theme of streamlining.

of 15 deliveries (total—120 deliveries), faced on a common aisle. Their combined output averaged 100 bobbins per minute of various counts and colors of yarn.

Baskets beneath deliveries received bobbins as they were doffed from spindles. When the baskets were full, a filling carrier man brought them to an intermediate station in the weave room where the contents were reloaded, according to style, in bobbin boxes.

A winder operative and helper ran the two winders, inspected yarn and bobbins, creeled supply packages, and made minor adjustments. Personnel carrying filling baskets away from the winders interfered with winder operators. 100 per cent inspection of bobbins by the operators was prevented in the confusion of moving baskets around, thus inviting mixed filling and bad bobbins. Naturally, the task of quality control fell upon battery fillers and increased their work load.

Results of the survey were submitted to the machine development department at Uxbridge. Into the hopper went a few notions and, after a vigorous twirl around, out came an auxiliary that brings the winder a jump closer toward the ultimate goal of true automatism.

It could be described simply as a built-in materials handling system for conveying bobbins away

Atomic Energy Harnessed to Inspect Coated Fabrics

Atomic energy has been cast in the peaceful and effective role of an "inspector" at the Textileather Corp. of Toledo, Ohio, where five beta ray gauges measure every yard of plastic coated fabric as it emerges from calendering machines.

The gauges, manufactured by Industrial Nucleonics Corp., Columbus, O., weigh the amount of plastic which has been applied to the fabric, giving a fast, accurate check on the quality of production. Previously, quality checks were made by cutting sections from each production run and putting the fabric through laboratory weight tests. Today, some sections are still tested from each production run but this is only for additional laboratory information.

The device, according to reports, consists of a U-shaped arm with the lower section containing a capsule of radioactive Strontium-90 and the upper arm having a detector device. The fabric passes between the arms.

During production runs, the beta rays bombard the fabric and the detector measures the number of radioactive particles which pass through the material. This information is translated instantaneously into pounds per square yard and is recorded on a chart housed in the control console.

The Strontium-90 in the unit is said to have a life span of 30 years.

from the winder. But, it's more than that. In the process of being conveyed, the bobbins are sorted, chalk-marked, and stacked into specially designed tote-boxes which fit on Uxbridge's W-3 looms.

Chalk-Marker. Four parallel endless belts which traverse the length of the winder are located beneath the spindles. The belts are divided into sections to form four separate troughs. Any number of consecutive deliveries on the winder can be grouped and isolated from other deliveries by adjusting the partitions.

The fully wound bobbin is discharged from the spindle, guided onto one of the four belts, and is conveyed to the end of the winder. Here it is transferred to another endless belt traveling at right angles to the first.

The second belt transports the bobbin to what may be considered the primary element of the improved winder—a chalk-marking machine for color coding bobbins. Here's what happens to the bobbin when it reaches the chalk-marker.

An endless chain carries the bobbin up an incline to the level of the chalking head. In the event several bobbins are simultaneously carried to the chalker, a contact roll dislodges all bobbins but one, causing them to drop down the incline where they will again engage the conveyor.

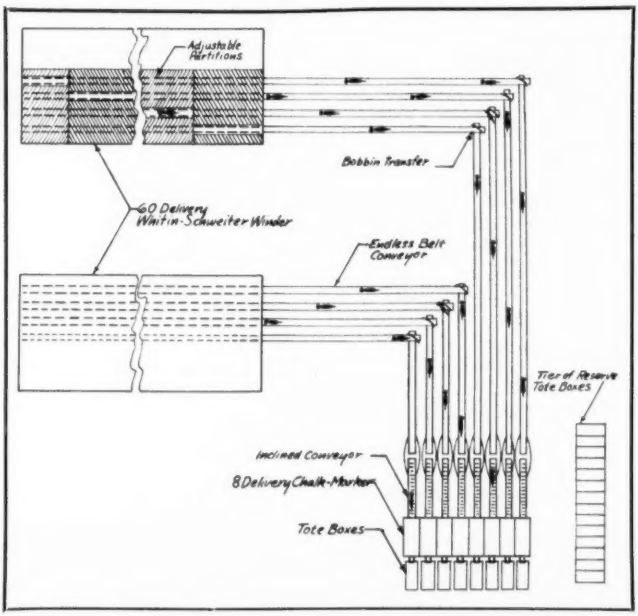
At the chalking head, the bobbin is gripped securely, but gently, by feed rolls and is marked by a revolving roll immersed in a chalk powder reservoir. The bobbin is then discharged into a tote-box.

The chalker has four deliveries, each marking with whatever color chalk is selected. A ¼ hp motor drives the four deliveries and their connected series of conveyor belts. Uxbridge set up two chalkers side-by-side for servicing the two Whit-in-Schweiter winders.

One operator tends the combined eight deliveries extending along a six-foot front. Every bobbin from the 120 spindles on the two winders comes under the close scrutiny of this operator. An index card describing the style filling is inserted in card holders at each delivery.

Benefits Derived. Besides making the occurrence of mixed filling virtually impossible, the chalker nullifies any chance of inferior bobbins passing on to the weave

PATH OF BOBBINS from winder to tote boxes is shown in this schematic diagram of the Bachmann-Uxbridge conveying system.



room. Also, bobbins are stacked more orderly, and a tote-box in which bobbins are properly oriented and aligned simplifies the task of loading up magazines on the looms.

With regard to the tote-boxes, brackets holding two boxes have been installed on each W-3 loom. Boxes are loaded on pallets in groups of eight at the chalker and then transported to the weave room. One other principal benefit of the chalker stems from the time and labor saved in the rapid transfer of bobbins from the winder to the weave room.

The winder operators, relieved of many supernumerary duties, now are more profitably engaged in keeping up a higher output.

Cotton Textile Industry Currently Convalescing Survey Shows

Improved sales volume in recent weeks in textiles clearly indicates an upward and long overdue swing in the market cycle which should result in sound trade conditions for the last half of the year, W. Ray Bell, president, The Association of Cotton Textile Merchants of New York, stated in the Association's annual "Ten Years of Cotton Textiles" survey. (See accompanying box for tabulation of equipment, operation, and market data pertaining to the cotton textile industry during the period 1942-1952).

After fifteen months of recessive business activity and declining prices, during which customer emphasis has been concentrated on reduction of stock and replacements have been restricted by a general policy of hand-to-mouth buying, the distributing trades have at length found themselves in an under-bought position in relation to actual and potential volume, and "ownership of current and future production is again finding favor as a preferred policy of normal operation in the various channels of trade."

Citing the close parallel of the recession of 1951 and first half 1952 to the similar 18-month 1948-49 depression, Mr. Bell noted that the current buying movement, first of its kind in many months, had originated in May in the sensitive print cloth division and has since broadened to include many major divisions of the trade.

Other grey goods, finished goods, colored goods, and mill fabricated lines have since enjoyed an expanding sales volume, and the improvement has widened from the cotton goods division to include synthetics.

Buyer attitudes have swung away from the extreme caution of many months, and the trade is now making liberal commitments for 60 and 90 day deliveries and in some cases into the last quarter of the year.

"Certainly current buying," he said, "is more sensible and apt to be more productive than the frantic covering at the top of the market in early 1951 when price was so widely ignored with such disastrous later results.

"Contributing also to the tone is the steady covering of military requirements which has made itself felt in record orders for cotton duck and in other commitments running far forward." He forsaw the probability of further military buying with the new fiscal year now beginning, and also cited four months January-April ex-

(*Continued on page* 180)

	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	24,137,106	23,737,944	23,342,822	23,105,944	23,787,000*	23,928,000*	23,727,000*	23,771,000*	23,341,000*	23,149,000*	23,152,000*
Increase or decrease from preceding year	−147,184	−399,462	−414,922	−236,980	+681,056	+141,000	−201,000	+44,000	−410,000	−192,000	+3,000
New installations, additions and replacements	210,456	7,751	62,736	323,686	523,056	416,355	567,356	638,823	649,760	771,065	
OPERATION											
CONSUMING COTTON ONLY											
Spindles active at any time during year ending July 31st	23,607,508	23,429,252	23,018,828	22,874,850	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Average number of active spindles based on twelve monthly reports	23,051,400	22,744,106	22,332,000	22,018,529	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Average number of spindles active in last working day of month	N.A.	N.A.	N.A.	N.A.	21,477,000	21,799,000	21,981,000	20,067,000	20,449,000	20,812,000	
CONSUMING FIBERS OTHER THAN COTTON, OR BLENDS											
Average number of spindles active in last working day of month	N.A.	N.A.	N.A.	N.A.	1,275,000	1,398,000	1,377,000	1,314,000	1,297,000	1,261,000	
ALL COTTON SYSTEM OPERATION											
Spindles idle during year ending July 31st	549,704	328,592	324,094	451,094	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Average number of spindles idle in last working day of month	N.A.	N.A.	N.A.	N.A.	1,122,000	1,068,000	1,000,000	2,134,000	1,872,000	1,284,000	
Spindle hours run											
On cotton system	13,556,352,000	13,413,065,000	13,144,440,000	12,734,592,000	10,474,292,000	11,616,384,000	11,448,000,000	9,874,000,000	10,252,000,000	10,240,000,000	
On other fibers, blends	N.A.	N.A.	N.A.	N.A.	5,675,000,000	6,340,800,000	7,102,000,000	5,818,000,000	7,200,000,000	7,560,000,000	
Hours run per average active spindle	5,795	5,814	5,849	4,878	5,094	5,475	5,414	4,882	5,760	5,748	
MARKET											
COTTON TEXTILES											
Production in square yards	12,204,811,000	11,560,224,000	10,572,420,000	9,779,238,000	10,175,225,000	11,061,181,000	10,000,179,000	9,391,578,000	11,206,839,000	11,106,509,000	
Exports in square yards	447,850,000	358,592,000	624,675,000	673,601,000	774,947,000	1,400,022,000	950,796,000	866,153,000	334,678,000	402,412,000	
Imports in square yards	17,664,000	19,895,000	11,218,000	40,029,000	43,778,000	73,982,000	51,740,000	19,745,000	47,590,000	45,720,000	
Available for domestic consumption	11,774,625,000	11,020,417,000	9,954,962,000	9,145,666,000	9,445,054,000	9,635,159,000	9,101,183,000	8,511,986,000	10,893,751,000	10,749,817,000	
Population at July 1st	134,811,000	136,719,000	138,380,000	139,934,000	141,389,000	144,126,000	146,631,000	149,188,000	151,684,000	154,111,000	
Available for per capita consumption in square yards	87.32	80.62	71.93	65.34	66.78	66.85	62.06	57.05	71.81	69.75	

Beam Storage Racks

conserve floor space, expedite handling

By FRANK L. BYRD

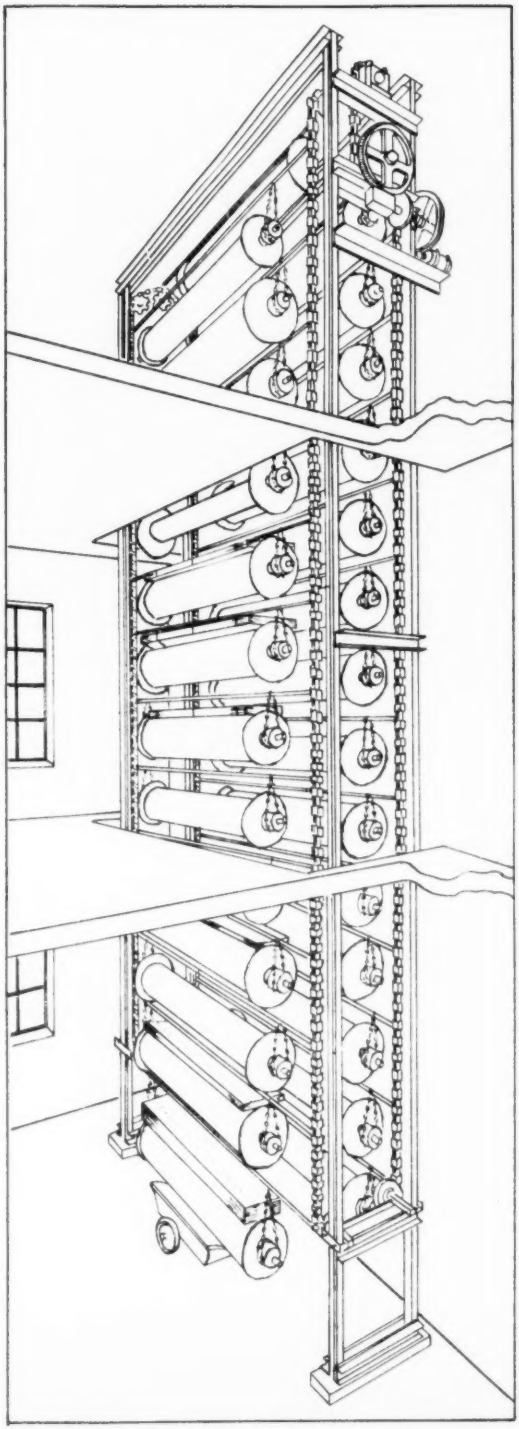
BEAM storage and handling is a problem which remains current in many mills. Any solution to the problem entails consideration of the amount of floor space available, location of floor space, and flow of full and empty beams.

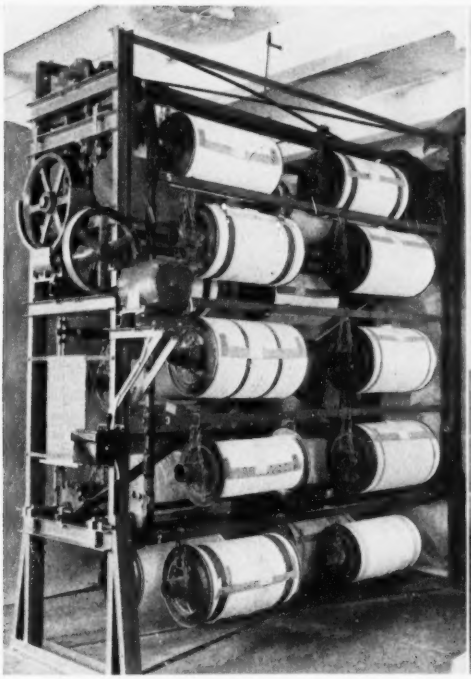
Several European mills have adopted a satisfactory arrangement for economically handling full and empty beams expediently without using more than a minimum of floor space. The arrangement embodies storage racks which are employed to provide protection for beams and yarn in storage (see accompanying illustrations).

A single bank, motor driven rack is used to handle up to 20 narrow loom beams. The rack occupies floor space equivalent to that required by nine beams placed on the floor.

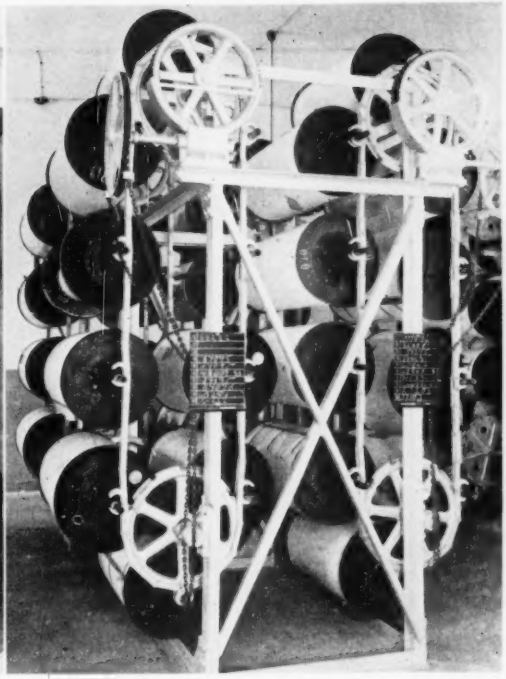
A two-bank rack is used for section beams and wide loom beams, and 40 beams with 30" heads can be stored in the space required for 16 beams stored on the floor. The two-bank rack is operated by a manual chain hoist, which permits one man to handle full or empty beams without any assistance.

The racks are versatile in that they may be easily adapted for



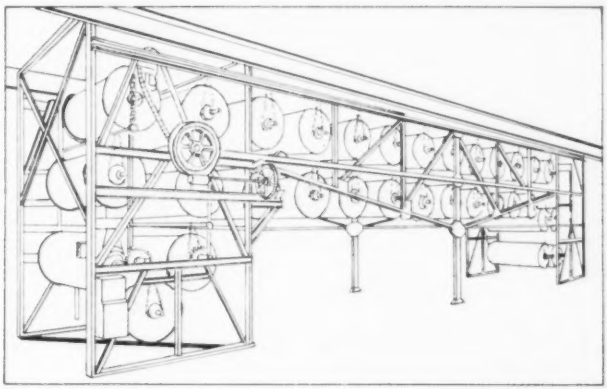


SINGLE-BANK RACK is motor-driven, accommodates 20 narrow beams, and occupies floor space required for nine beams stored on the floor.



DOUBLE-BANK RACK for section beams and wide loom beams carries 40 beams with 30-inch heads and occupies space usually required for 16 beams.

VERSATILITY is a feature of the racks. They may be easily adapted to meet requirements of each application (see sketches on these two pages).

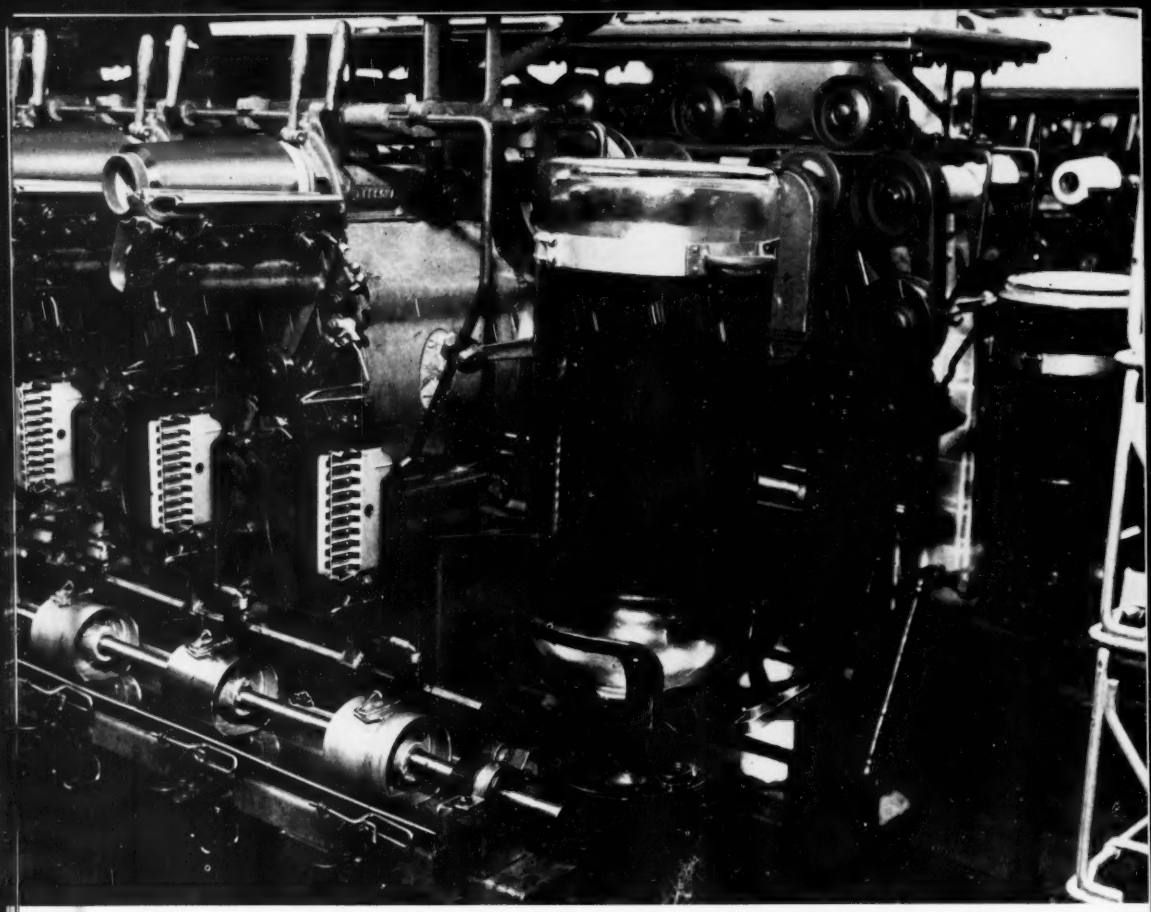


each application and installation. A blackboard may be provided on the framework, and warp identification data marked on the board serve as an invaluable aid in finding warps to fulfill specifications and delivery dates. Compressed air or long handled brushes may be used effectively to clean the structure.

In several European mills the racks extend from the basement up through several floors, thereby permitting use of the arrangement as an elevator as well as a storage facility. In another mill the racks are used to transfer equipment from the warper room to the slasher room three floors below, and the rack also serves as a convenient storage place for full and empty section beams.

Sprockets, chains, and other parts are fabricated especially for the racks, and several European manufacturers make the parts and assemblies on a production basis. The units are not expensive, according to several mills using the racks as standard equipment.

Mill officials stated that the reduction in warp damage and warp waste helped defray the cost of the racks, and the convenience and additional available floor space make the investment well worthwhile.



SUPPLY OF SOFTENER should be kept free from contaminants. Troughs, immersion rolls, and all other parts are harbors for dirty deposits. This machine appears to be clean before cleaning actually begins.

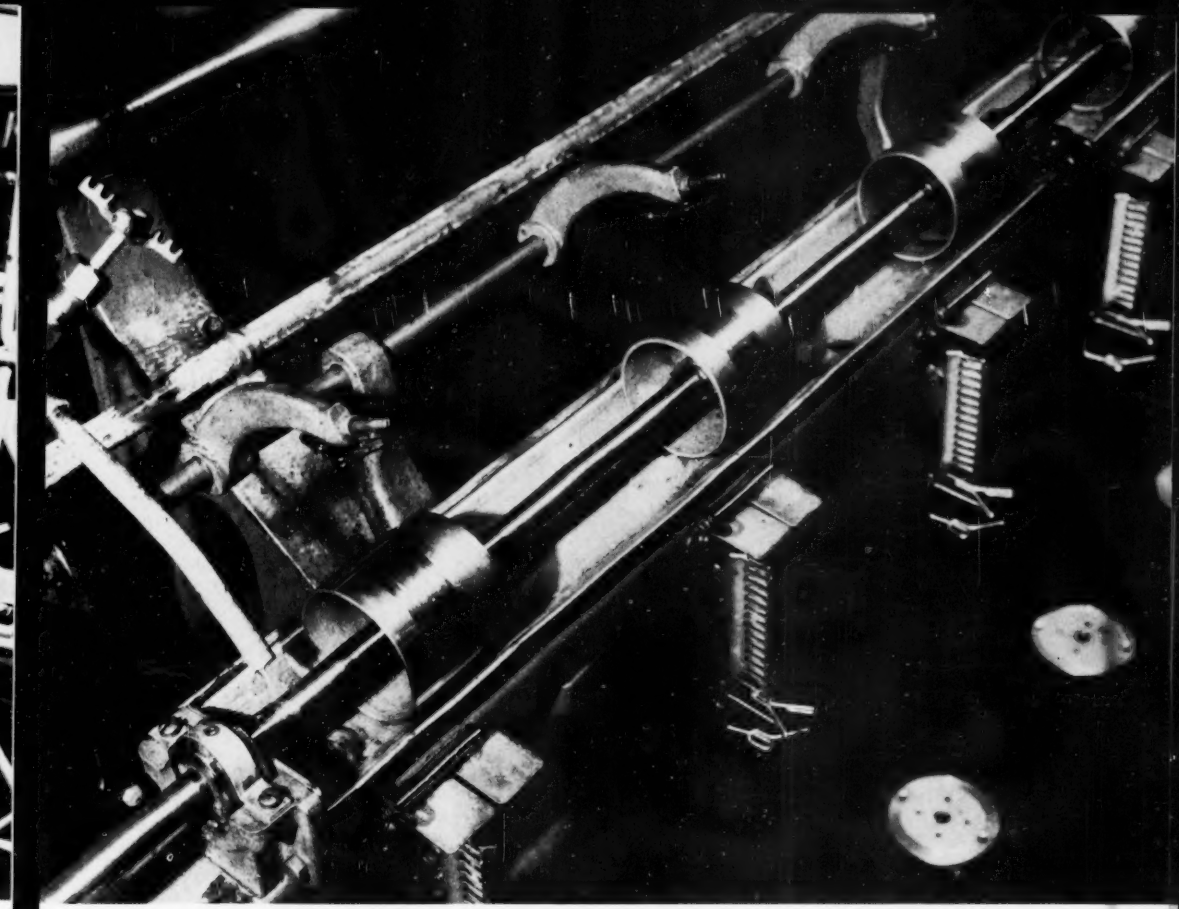
Machine Cleanliness is Vital

Staff Prepared

CLEANLINESS is essential in throwing nylon yarns for use in either hosiery or tricot fabrics. Frequent cleaning of sizing machines, coning machines, and oil troughs is a must if quality results are expected. Throwing equipment at Tennessee Knitting Mills, Inc., Columbia, Tenn., is cleaned on Saturday of each week, and the schedule is rigidly enforced.

Most knitting mill managers have decided that it is much simpler to dispense with many headaches and buy the yarn from commission throwsters; however, the philosophy in this mill is that when stiff competition prevails, knitting mills having their own throwing facilities may be able to (provided they have the "know-how") remain more competitive.

TKM uses U. S. Textile Machine Co. coners and Atwood and other Universal Winding Co. equipment, including sizing machines. In the sizing operation for hosiery yarn, the size distribution system was made and adapted to the machines by mill mechanics. The solution is piped to kettles and pumped into standpipe reservoirs from which it flows by gravity into the size troughs and is constantly recirculated. The size system is a variation of those in common use in other mills. Fresh size is automatically and continuously



TO ASSURE CLEANLINESS. sizing machines are cleaned with hot water, which is forced through the pipes and size troughs. Note clean appearance of all machine components, which remain in like-new condition.

to Quality Throwing of Nylon

added to the solution as the supply is depleted by the yarn being sized.

Twister operators are required to keep their hands clean to prevent soiling the yarn they handle.

In this mill, the management insists on thorough cleaning of the sizing machines too. Hot water is circulated through the size distribution system to remove any coagulated size residue or deposits and to remove all traces of foreign matter to insure cleanliness and

Saturday is clean-up day for throwing equipment at Tennessee Knitting Mills

good results in size penetration. The yarn is expensive, and one little speck of grease or dirt can be expensive if it gets into the yarn.

Steam Cleaning. The sizing machines are several years old (relatively new); however, after much service, the machines appear in factory-new condition as a result of rigid cleaning schedules in force in this progressive plant. A portable steam generator (Livingston Engineering Co.—Speedylectric) is used effectively in cleaning the machines, which are allowed to run with no yarn on them on Sat-

HANDLING YARN. In twisting and other operations where the yarn must be handled, it is essential that operatives keep hands clean to prevent soiled and greasy yarn.

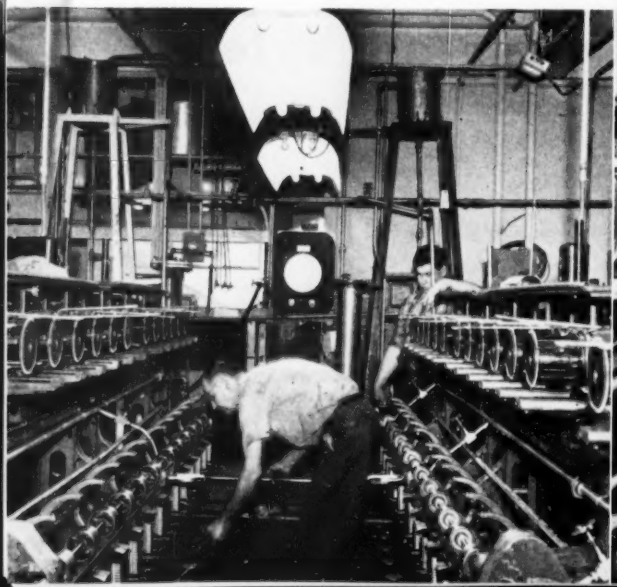
urdays, at which time they are cleaned.

Advantages of Integral Throwing. Many different styles and sizes are made simultaneously in this versatile mill, and retention of the throwing department is an advantage in obtaining yarn of the desired specifications on demand, with little likelihood of a bottleneck to delay production, and with no delays in shipping schedules.

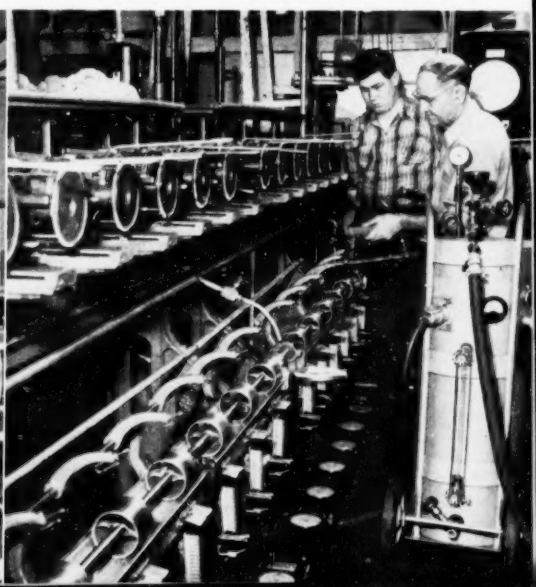
In this instance, having the throwing plant in the mill is an advantage in that the operation is close at hand, can be controlled at will, and the inter-relation of production difficulties can be observed first hand. TKM has found the throwing department an asset, and it plays an important part in quality control. Quality control begins in the throwing department which this mill has elected to maintain.

End Use Controls Process. Sizing is done as a single operation on knitting yarns in that it is necessary to apply more sizing or binding agent than is used on other types of yarns. The use of small yarn packages reduces the quantities of yarn and time involved in any one loss.

STEAM CLEANING is an important phase of the cleaning operations at TKM. In each instance the entire machine is cleaned thoroughly. Note the elevated tanks which are part of the size distribution system.



ADEQUATE CLEANING EQUIPMENT is provided. The operatives are using an electric steam cleaning apparatus. Clean hot water is forced through the entire size distribution system.



Cotton's Minor Constituents

(*their role in utilization*)

IF THE MANUFACTURING operations for producing finished goods from cotton are to be improved, a better understanding of the nature of the fiber's minor constituents is essential. The findings presented here, although fundamental in nature, have considerable practical significance. For example:

Wax in cotton serves as a lubricant for the fiber and is necessary for proper preparation of cotton for spinning. If wax is removed, cotton accumulates static electricity.

Removal of the wax after the yarn is spun increases the tensile strength of yarns and fabrics.

Protein in cotton appears to have only minor affect on the dyeing properties; however a high content of nitrogen in finished fabrics, due to poor scouring, is said to favor damage by bacteria and molds.

Ash alkalinity and pH are useful indices of extreme field deterioration.

About 85% of the ash may be removed from the fiber by extraction with water, but most of the calcium, magnesium, iron, and aluminum remain.

Total sugar content ranges from 0.05 to 0.25%; however these materials are soluble in water and are removed in scouring.

By CARROLL L. HOFFPAUIR
Southern Regional Research Laboratory[1]
New Orleans, Louisiana

COTTON FIBERS are paradoxes of commonplaceness and mystery. They are well known in some respects, yet not at all in others. To cotton mills utilizing the fiber properties that are best understood at present, there is ever the intriguing aspect of cotton's undeveloped opportunities.

To consider the full possibilities of cotton, it is necessary to know its exact nature. What is cotton? Each fiber is produced by the outgrowth of a single epidermal cell, starting shortly after the cotton flower opens, to form a long tube-like cell with an ultimate length 1000 to 4000 times the cross-sectional diameter. In 15-18 days, depending on seasonal conditions, the cell wall starts to thicken and elongation practically stops. After the boll opens, in 50 to 60 days after flowering, the fiber dries out to a ribbon-like cell with a more or less thickened wall of cellulose. Biologically, then, each fiber is the dried remains of a single cell.

Chemically, cotton is a rather complex substance. Its major component is cellulose; in fact, cotton is our richest native source of cellulose. But cotton is not all cellulose. Any of the substances commonly found in plant cells may be present in at least small amounts. Such substances include protein and other nitrogenous materials, salts of inorganic and organic acids, pectic substances, wax, sugars, and other miscellaneous substances.

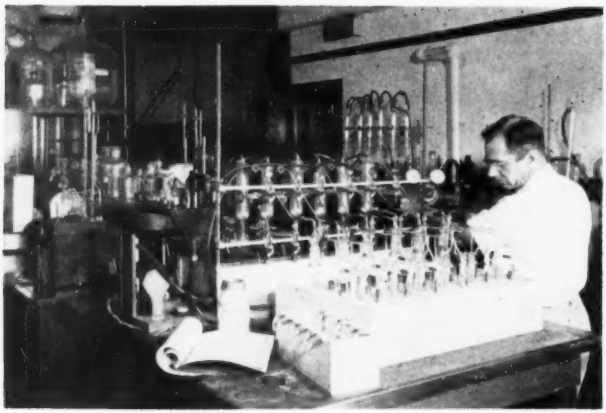
How much of these noncellulosic constituents are present in cotton fiber? How do they influence the processing of cotton and the finished material? These are among the questions the Southern Regional Research Laboratory has been attempting to answer in its research on the utilization of cotton.

Value to Mills and Research. A better understanding of the nature of these constituents furnishes a background to a better understanding of the processing of cotton. Such background is essential to improving the efficiency and economy of the manufacturing operations for producing finished goods from cotton. Similarly, information regarding the properties and occurrence of minor constituents may lead to methods of scientific control for some of the steps in the manufacture of cotton textiles, so that better, and more uniform, finished products may be produced.

In addition, a thorough knowledge of the noncellulosic constituents found in cotton is basic to establishing tests for evaluating changes or deterioration due to weathering or other conditions to which the cotton is exposed. Such tests may prove useful in the merchandising of cotton as well as in selecting cottons for blending into even-running lots for processing.

Generally speaking, the dry raw cotton fiber contains from 4 to 12

[1]One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.



PECTIC SUBSTANCES in cotton are determined by chemical analysis.

per cent of substances other than cellulose (see Table I). Several of these constituents have considerable effect on the behavior of the fiber during mechanical processing. Some aid processing while others detrimentally influence the properties of the finished goods and in order to obtain the most satisfactory product must be removed by chemical finishing operations. Consequently, the noncellulosic constituents account for appreciable loss in weight during the finishing of cotton.

As very little attention has been given in the past to the complete analysis of individual samples, the chemical composition of 6 commercial raw cottons was investigated, quantitatively, by Southern Laboratory scientists to provide basic information about the nature and amounts of constituents in the fiber. Prior to chemical analysis, the cottons were blended and cleaned by the use of standard textile mill equipment until they were essentially free of dirt, trash, and other foreign matter. Considerable variation in the chemical composition of the cottons is apparent (see Tables II and III). This variation, presumably, is due to the influence of variety and environment on the development and maturation of the fibers and to field weathering before picking. Although cellulose was the major constituent in all the cottons examined, appreciable amounts of other constituents were found in each sample. These noncellulosic constituents are discussed forthwith.

Wax. The material extracted from cotton fiber with appropriate organic solvents is usually referred to as wax. Typical mature cotton contains about 0.6 per cent of wax although, as can be seen in Table II, the amount varies from approximately 0.4 per cent to approximately 1.1 per cent. Cotton wax may be classed with the plant cuticle waxes and is similar in X-ray diffraction pattern to the well known carnauba wax. It is a complex mixture composed largely of high - molecular - weight alcohols, fatty acids, and their esters. It also contains glycerides, sterols, resinous materials, and other minor components.

From the standpoint of processing, wax is probably the most important of the noncellulosic constituents. It has a striking influence on the wetting properties of the fiber. Raw cotton will float for days on water, and cotton from which the wax has been removed or redistributed will sink rapidly. This wax serves as a lubricant for the fiber and is necessary for proper preparation of cotton for spinning; for, if it is removed, cotton accumulates static electricity and does not behave satisfactorily in these processes.

However, in the later stages of processing, the removal of wax may be advantageous. Because of its lubricating properties, wax decreases the tendency of the fibers to cling to each other and reduces the friction between them. Hence, its removal after the yarn is spun increases the tensile strength of yarns and fabrics. A large part of the wax is removed from cotton during kier boiling and scouring, so that commercially-scoured cot-

TABLE I

Selected Values for the Composition of Typical, Mature Cotton Fiber; Dry Basis*

Constituent	Typical (%)	Low (%)	High (%)
Cellulose	94.0	88.0	96.0
Protein (N x 6.25)	1.3	1.1	1.9
Pectic substances	0.9	0.7	1.2
Ash	1.2	0.7	1.6
Wax	0.6	0.4	1.0
Malic, citric, and other organic acids	0.8	0.5	1.0
Total sugars	0.3		
Pigment	Trace		
Other	0.9		

*Moisture regain about 8%

TABLE II

Analysis of Cottons; Dry Basis

Contituent	Empire	Wilds	Stoneville 28	Unknown mature	Unknown immature	Unknown (probably Mebane)
Cellulose (%)	95.30	93.42	95.58	96.41	92.44	94.93
Total sugars (%)	0.07	0.25	0.18	0.17	0.13	0.11
Reducing sugars (%)	0.01	0.17	0.04	0.02	0.03	0.02
Total nitrogent (%)	0.17	0.26	0.18	0.16	0.32	0.19
Wax (%)	0.73	1.07	0.69	0.45	1.14	0.57
Ash (%)	0.86	1.32	1.00	0.79	1.32	1.16
Ash alkalinity*	13.97	20.52	14.81	11.75	21.75	16.46
pH of the water extract	7.16	6.23	7.50	7.58	5.84	6.46
Water—xtractables (%)	3.07	3.06	2.43	2.08	3.05	3.24
Organic acids*	8.20	13.67	7.88	5.77	14.56	12.87
Malic acid*	2.80	8.51	3.24	1.66	6.08	7.20
Citric acid*	0.66	1.45	0.74	0.58	1.49	0.86
Pectic acid*	5.6	6.9	4.8	3.2	7.0	4.7

*Milliequivalents per 100 g.

Industry Held Position in Overseas Markets

Since the founding of the Textile Export Association of the United States in 1930, there have been few years as fateful as this. In many respects it could be termed "a hinge year" since it opened the door on a new and radically different era in international trade in textiles. It was a period which saw the abandonment by most nations of complacent "come-and-get-it" merchandising and the revival of the oldtime, rough-and-ready, no-holds barred struggle for export orders.

Our American industry during most of the year succeeded in holding its position in most of the overseas markets it serves. The slump in our domestic markets and the consequent fall in prices enabled us to keep abreast of competing nations, especially those handicapped by stocks of high-priced cotton which they were forced to buy during the period of scarcity when exports of American cotton were being allocated. This advantage began to peter out toward the end of last year and we are now confronted with competition from foreign mills which buy cotton for the same price as American mills and whose labor costs are much lower.

Our activities during the year were directed toward the preservation of markets which we have assiduously cultivated for years and are now endangered by the revival of foreign competition or by the machinations of newly established so-called home industries.

It can be definitely said that our industry is "export-minded." It is realized on all sides that export volume in 1951 and in the first quarter of the current year prevented the slump in our industry from becoming a disaster.

This widespread interest in export problems has led to a number of interesting developments, such as prompting our industry to take a keen interest in news of foreign industries. The most striking manifestation of this interest lies in the decision of the industry to participate in the International Cotton Textile Conference in England in September.

Developments last year that gave us the most concern were the revival of Oriental competition, the continued expansion of home industries and consequent application of crushing tariffs, notably in Cuba, and the restoration of restrictions by a number of countries as a result of exchange difficulties arising from the drop in commodity prices. All of these problems are still with us and most of them are worsening.

Overshadowing all of our specific problems last year was the raising of tariffs on cottons and rayons by Cuba.

Noteworthy among our activities in the last year was the expansion of our statistical services. Our monthly compilation of exports of cotton textiles on a country-by-country basis was speeded up. Our association is now the sole source of information of this character, but we are forced to restrict it to members only.

Late last year we began the monthly tabulation of statistics covering shipments of fabrics of man-made fibers. We are now in a position not only to supply members with this data on a monthly basis but also comparisons with the corresponding month of the previous year.

Brief of annual report of Textile Export Association of the United States.

ton usually contains only about 0.2 to 0.3 per cent wax.

Protein. The total nitrogen content of mature raw cotton usually ranges from 0.15 to 0.35 per cent. If all this is considered to be protein nitrogen, the values may be multiplied by the conventional factor of 6.25 to give a range of 0.9 to 2.1 per cent protein. It is likely, however, that part of the nitrogen is present in nitrogenous substances other than protein.

Microscopic-staining tests show that the protein is located chiefly in the lumen, or central part of the fiber. This would be expected since the lumen contains the dried residue of the protoplasm of the cell.

Protein is readily removed from cotton by a mild alkali boil, and contributes to the brown color of kier liquors. Very little remains in scoured and washed cotton materials. The presence of protein in cotton appears to have only minor effects on the dyeing properties. However, a high content of nitrogen in finished fabrics, due to poor scouring, is said to favor damage by bacteria and molds.

It is difficult to isolate the protein from cotton fiber in pure form due to its adsorption on the cellulose. However, the presence of several amino acids, including glycine, serine, alanine, and valine, has been demonstrated in the acid hydrolyzates from preparations of crude protein.

Pectin and Organic Acids. Most of the pectin in cotton fiber appears to be localized in the primary cell wall in the form of calcium and magnesium salts of pectic acid. It is readily removed from the fiber by kier boiling but not by extraction with water alone.

Several other organic acids, including citric, l-malic, and oxalic acid, have been identified in raw cotton. These acids occur in the fiber largely as water-soluble potassium salts. The presence of

TABLE III

Analysis of the Ash of Two Raw Cottons

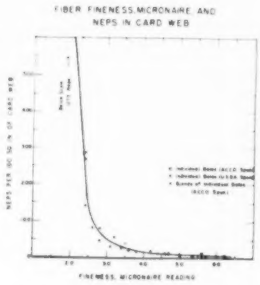
Ash constituent	Unknown (probably Mebane) (%)	Empire (%)
K_2O	48.16	45.58
CaO	7.19	1.55
MgO	9.04	10.88
Na_2O	0.25	0.66
Fe_2O_3	0.20	0.36
Al_2O_3	0.31	0.73
SiO_2	0.76	0.75
SO_3	8.24	7.04
P_2O_5	4.22	4.40
Cl	1.22	2.12
CO_2	20.25	19.83
Total	99.84	99.90

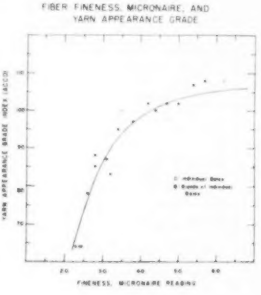
Cotton Fiber Fineness Indication of Neps, Yarn Appearance

Fiber fineness, expressed as Micronaire readings, is an excellent index of the number of neps to be expected in the card web and also the yarn appearance grade within a given grade and staple of cotton, according to an article (by Charles T. Marth, Harry E. Arthur, and Earl E. Berkley of Anderson, Clayton & Company's fiber spinning laboratory) to appear in the September issue of the "Textile Research Journal."

Individual bales of cotton of Middling grade or better in the range of 15/16" staple that have Micronaire readings of 3.5 or higher can be spun into yarns of good to excellent yarn appearance grades, the grades increasing with the Micronaire readings. Thin-walled, immature cottons giving Micronaire readings below 3.0 tend to produce yarns of low appearance grade extending to well below grade if the Micronaire readings are below 2.5.

Blends of cottons with 3.5 or higher Micronaire readings produced high grade yarns, whereas blends including bales with Micronaire readings below 2.5 produced neppy, low grade yarns. The dividing line between cottons that produce medium to high grade yarns and those that produce low grade yarns is dependent somewhat on the treatment the cotton is given but is in the neighborhood of 3.0 to 3.5 Micronaire reading for short staple American Upland cottons. Since processing treatments increase the neps, high grade cotton would be expected to produce fewer neps than low grade cotton of the same length and fineness.





Cottons for certain purposes where neps are a problem can be selected on the basis of data of this type in addition to grade and staple. Since laboratory spinning data may not be on the same level as mill tests, each mill should run a check to determine their level of test and the limits of fineness that can be tolerated for each general type of product.

Fine fibers are desirable for strong yarns and they can be spun at lower twist multipliers than coarse cottons of a given staple length; therefore, it may be an advantage to choose as fine a cotton as can be used.

Additional studies are in progress to show the relationship of fineness to neps for longer staples and different grades of the same length and fineness.

these organic acid salts in the fiber accounts for the alkalinity of cotton ash.

Weathered cotton exhibits a decrease in the content of organic acid and an increase in pH. These changes are brought about by the use of the organic acids as foods by micro-organisms, leaving the potassium of the salts of the organic acids in the fiber as the carbonate. Rain may remove some of the organic and inorganic salts with the result that the alkalinity of the ash from the cotton may be reduced. Thus, ash alkalinity and pH are useful indices of extreme field deterioration.

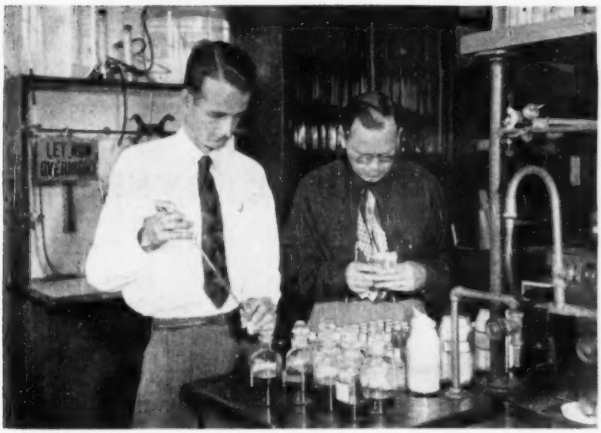
Cottons which have not been exposed to weathering usually contain 0.6 to 1.2 per cent of pectic acid and 0.7 to 0.9 per cent of other organic acids, including 0.3 to 0.6 per cent of l-malic, 0.05 to 0.10 per cent of citric, and 0.002 to 0.005 per cent of oxalic acid.

Since the observed values for total organic acids are larger than the sum of the values for the individual acids which have been identified, the presence of still other acids is indicated. Additional research is needed to identify them.

Ash Constituents. When cotton is burned a strongly alkaline ash, amounting to 0.7 to 1.6 per cent of the weight of the dry fiber, remains. The ash consists of the inorganic residues from the salts of both the organic and inorganic acids that were present in the fiber. Complete analysis of the ash (Table III) shows that potassium is the principal metallic element present, though the ash also contains appreciable amounts of calcium, magnesium, sodium, iron, and aluminum. Metals present in trace amounts include copper, manganese, boron, and zinc. Carbonate, sulfate, phosphate, chloride, and silicate account for most of the acidic constituents.

About 85 per cent of the ash may be removed from the fiber by extraction with water, but most of the calcium, magnesium, iron, and aluminum remain. After commercial scouring and bleaching, the ash content is usually negligible.

Carbohydrates and Related Materials. As would be expected of a material of plant origin, raw cotton contains a number of carbohydrates, although these are present in relatively small amounts. The total sugar content ranges from 0.05 to 0.25 per cent. This includes small amounts of a galactoaraban, which is a complex polysaccharide, and of glucose, fructose, arabinose, galactose, and rhamnose, which are simple sugars. Inositol, which is related to the



pH OF COTTON is determined colorimetrically by chemists at Southern Regional Research Laboratory.

sugars and usually classified as one of the "B" vitamins, has also been identified in raw cotton. Since these materials are soluble in water, they are removed in the scouring process.

Conclusion. The information thus far obtained about the minor constituents of cotton, although fundamental in nature, has considerable practical significance in the progress of applied research. Each time new information about cotton is provided by research of this kind, unanswered questions about the fiber become fewer and the possibilities for achieving maximum usefulness are increased.

In an effort to make its findings in this field of the greatest possible value, the Southern Regional Research Laboratory has published a number of articles describing the technical aspects of research on the composition of cotton. Reprints of the following articles are available, on request, from 2100 Robert E. Lee Blvd., New Orleans, Louisiana:

Survey of the Chemical Composition of Cotton Fibers, Cottonseed, Peanuts, and Sweetpotatoes. A Literature Review, by John D. Guthrie, Carroll L. Hoffpauir, Mark P. Stansbury, and Wilson A. Reeves. AIC-61 (Revised March 1949).

The Organic Acid Content of Raw Cotton Fiber. Isolation of l-Malic and Citric Acids from Cotton Fiber, by Elizabeth R. McCall and John D. Guthrie, J. Am. Chem. Soc., 67, 2220-2221 (1945).

Determination of Wax Content of Raw Cotton Fiber. Nonvalidity of Preliminary Treatment with Hydrochloric Acid, by Claire Lesslie, Lamont Hagan, and John D. Guthrie. Anal. Chem., 21, 190 (1949).

The Organic Acid Content of Various Samples of Raw Cotton Fiber in Relation to Ash Alkalinity and Leaching by Rain, by Elizabeth R. McCall, Vidabelle O. Cirino, Samuel M. Stark, Jr., and John D. Guthrie. Science, 108, 360-361 (1948).

Demonstration of the Presence of a Galacto-Araban in Raw Cotton Fiber, by John D. Guthrie and Wilson A. Reeves. Textile Research Journal, 20, 859-861 (1950).

Determination of Pectic Substances in Cotton. Colorimetric Reaction with Carbazole, by S. M. Stark, Jr. Anal. Chem., 22, 1158-1160 (1950).

Chemical Composition of Cotton, by Elizabeth R. McCall and Julian F. Jurgens. Textile Research Journal, 20, 859-861 (1950).

Trace Metals in Cotton Fiber, by Dorothy C. Heinzelman and Robert T. O'Connor. Textile Research Journal, 20, 805-807 (1950).

The Colorimetric Determination of the pH of Cotton Fibers, by Walter A. Pons, Jr., and Carroll L. Hoffpauir. To be published in Textile Research Journal.

Slashing Continuous Filament "Orlon" Warps

Results of recent experiments on slashing of low twist continuous filament "Orlon" warps have been published by the Du Pont Co.

Equipment. The equipment settings and string-up used on a Johnson seven-drum slasher with small size drying cans were: string-up—1 dip, single nip; quetsch roll—rubber, not booted; quetsch pressure—850 pounds (approximately); split rods—single before size pan, single after size pan, single before take-up roll; size box temperature—150 F; drying can temperatures — No. 1, 180 F; No. 2, 200 F; No. 3, 210 F; No. 4, 210 F; No. 5, 200 F; No. 6, 180 F; No. 7, room temperature; slasher speed—25 to 35 ypm; stretch—0% to 1%.

Size ingredients. Previously published information regarding the use of a medium strength gelatin was unchanged except that the formula for a 100-gallon total mix was amended to include 75 pounds gelatin (Peter Cooper Code 1X) instead of 50 pounds. Quantitites of softener and penetrant remained the same.

Formulas for "Stymer," "Elvanol" 52-22 Polyvinyl Alcohol, and "Elvanol" 51-05 Polyvinyl Alcohol remained the same, with "Tyze" No. 2 Resin Textile Size being deleted.

Experience with two additional ingredients was given —"Glycerowax" 700 Size and Nylon Size No. 488, both products of L. Sonneborn Sons, Inc.

Formula utilized with the first was: 100-gallon mix with water; 65 pounds gelatin (Peter Cooper Code 1X); 12 pounds "Glycerowax" 700 (softener); 2½ pounds "Penequick" (penetrant by Sonneborn). The "Glycerowax" 700 was dissolved in water at 160 F and added to the gelatin solution with stirring. The "Penequick" was then added to the whole solution with good stirring.

With Nylon Size No. 488 the formula was: 100-gallon mix with water; 20 gallons Nylon Size No. 488. The size was dissolved in water at 150 F and applied at 130 F. Can temperatures were 160, 180, 180, 190, 180, 160, room temperature.

According to the bulletin, recent experience, although slight, has shown that both 100 and 200 denier "Orlon" may be slashed on a Cocker slasher at 35 ypm with can temperatures of 180 F on the first two cans and 200 F on the next four. The last can is at room temperature.

ASME Textile Division told of

Two New Wool Blending Systems

THE RESULTANT impact of the cost reductions possible in properly designed blending systems makes this subject of vital interest and significance.

During recent years the increase in the cost of labor and the need for more uniform laying, oiling, and picking of the blend have accelerated the development of new blending systems. Two such systems are described here.

Properly designed wool blending system should provide:

1. The preparation of the baled fibers to a size suitable for proper blending
2. The proportioning of the various components of the blend
3. The actual assembling of the components in layers and the breakdown across the face of the layered components in either a continuous or an intermittent flow
4. The handling of the blend through automatic relay operations in a manner that will hold the integrity of the blend and permit the complete batch to come to rest to assure moisture equilibrium prior to final processing
5. Application of emulsion evenly and in proper amounts
6. The economical handling of the finished blend

By HARMON B. RIEHL

Proctor & Schwartz, Inc.

For Large Batches. One installation (Fig. 1) for handling stock in large batches is arranged with a series of several automatic weighing feeds, each one taking one kind of stock in bulk, weighing it out continuously and making the one stock into a uniform layer. This layer is of the proper percentage as set for the blend. These weighing feeds are under the control of a monitor system which, in case of a light dump or skipped dump, immediately shuts down the entire line of feeds and indicates with a light the feed that is at fault. The entire line automatically shuts down before the light dump can be placed on the already weighed layers.

These uniform layers of stock are now automatically placed one on the other on a slowly moving transverse apron which presents the several layers to a breakdown picker. This picker is designed to handle large quantities of material with little or no fiber fracture, but with the teeth of the cylinder combing across the face of the layered weighings so that a portion of each layer is taken uniformly as the cylinder works across the face of the material. At this point the emulsion is placed on the layers through controlled flow meters so that the exact proportion of emulsion to stock is as required throughout the run.

The material so picked is fed through a coiling condenser to the primary magazine storage bin, 10 ft. wide x 10 ft. high x 45 ft. long, over which is placed a reversing roll distributor. This patented device makes possible the re-blending of the picked stock over designated areas automatically and at a capacity equal to the discharge rate of the picker—usually approximately 5,000 pounds per hour. The use of this bin, which involves a new engineering principle of laying stock automatically, is responsible for the great saving in direct labor that is possible in these types of blending systems [see box p. 116].

The continuous system discharges the blended material directly to the card feed through an overhead reversing-apron distributor. This distributor consists of a series of over-lapping aprons with the point of overlap located over the center of the card feed. These aprons start and run in one direction, or reverse as required, to place the mix in the feed calling for stock. They operate only when the card feeds call for stock and when all feeds have the right amount of stock the aprons stop. This distributor is very effective when all the cards operate with the same mix. It not only is a labor saving device, but keeps the cards operating at their efficiency and capacity.

For Small Batches. Another installation (Fig. 2) for blending stock for thirty sets of woolen cards in small batches (none in excess of 5,000 pounds each, with the average around 1,500) employs most of the equipment described in the previous system, but the arrangement is somewhat different

*Extract of paper presented at the spring meeting of the Textile Division, American Society of Mechanical Engineers, Boston, Mass.

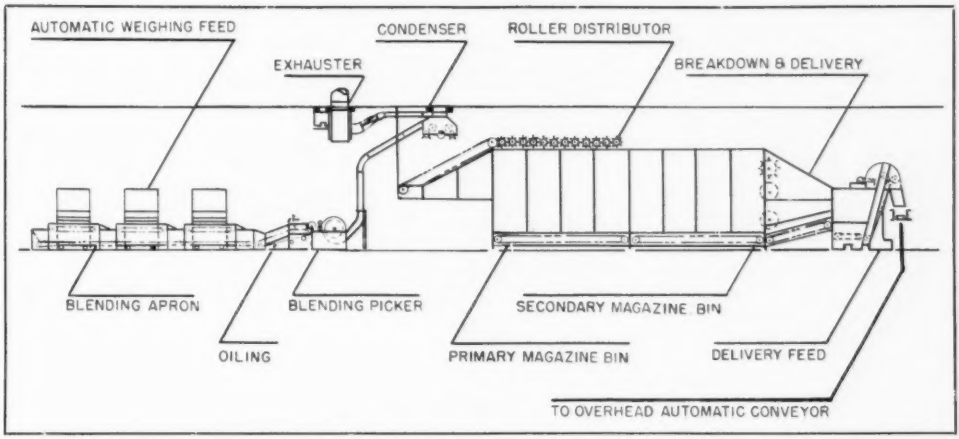


FIG. 1. CONTINUOUS BLENDING SYSTEM for large batches. This system handles the blending of material for a card room requiring 1,200 lb per hour. With the card room operating on a three-shift basis, the blending system runs with two men working on one shift to supply the total required blended material for three card room shifts. Component fibers after entering the automatic feeds progress completely automatic in all subsequent operations to the point of doffing at the finisher card.

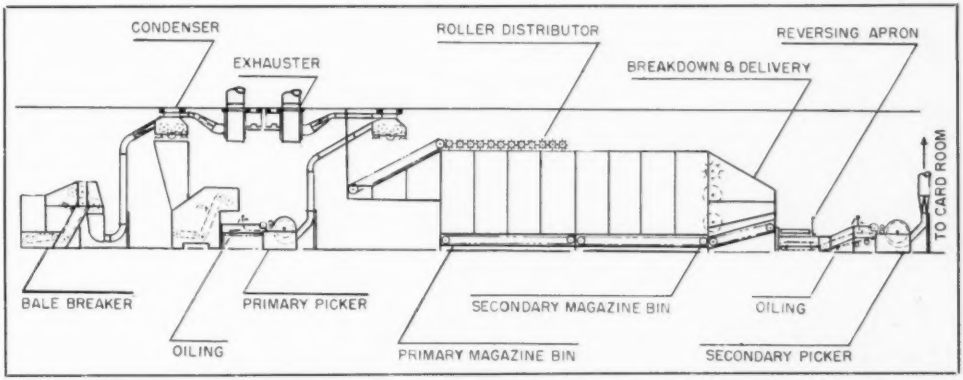


FIG. 2. BATCH BLENDING SYSTEM for small quantities of material. This system blends stock for thirty sets of woolen cards in small batches (none in excess of 5,000 lb each, with the average around 1,500).

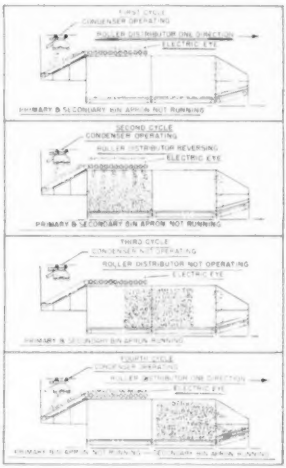
because we are able to bring each and every batch to a complete rest before any subsequent operations are performed. Here all of the components of the batch are placed near the station of the initial machine in the line (a bale breaker) and the components are thrown into this bale breaker one at a time until each has been consumed. The bale breaker in turn breaks down the baled fiber into such sizes that it can be fed to the blending picker, which picks the stock as presented to it, and in turn through a suction condenser to the primary magazine bin with a reversing roll distributor.

The apron of this magazine bin remains stationary until the entire batch has been picked and distributed in this magazine bin. When all of the batch has been deposited in this bin, the stock is moved forward into the secondary magazine feed at the rate of 15 ft. per minute until all has been placed in the secondary bin. At this point the floor apron of the secondary magazine bin is slowed down to the normal discharge rate, where the 10-ft. pile is broken down across the face with a patented breakdown roll arrangement by which it is discharged onto the cross apron which feeds the second blending picker.

The picked stock is then re-laid in the primary magazine section again until the entire blend has been re-laid, then advanced at the accelerated rate for final oiling and

Working Cycle of the Roller Distributor

As the stock for the primary picker is placed on the rolls, all the rolls revolve clock-wise until the stock reaches the last roll, at which point an electric eye reverses every other roll for one revolution, thus dropping all the stock on the roll onto the apron of the magazine bin. The clock-wise rotation is resumed and the rolls cleared again as the stock reaches the electric eye. Thus, a series of layers is made automatically as the cycle is repeated until the bin is completely filled. Reversing roll distributors, 5 to 15 ft. wide and up to 90 ft. long, are operating successfully in several mills. These rolls may be made in excess of 15 ft. provided a center bearing is used, and as long as required.



During the time that the material is being distributed into this primary magazine bin, the bottom apron is stationary. When the bin is completely filled the material is fed into a secondary magazine feed attached to it. It is the same size and construction as the primary magazine bin with the exception that it does not have the automatic reversing distributors placed above it. It does have its own apron and, during the period in which the stock is moved out of the primary magazine bin, the aprons of both bins are coupled together and are operated at approximately 10 ft. per minute.

When all the material has been moved into the secondary magazine feed, its apron is slowed down to the normal discharge rate of approximately 18 inches per minute and the apron in the primary bin remains stationary while it is again being filled from the picker line. The material, 10 ft. high, as discharged from the secondary magazine bin, receives additional blending through the action of the breakdown section rolls which work across the face of the 10 ft. pile of stock.

These rolls place it onto the attached lattice apron, which in turn feeds the blended stock to a series of overhead conveyors which supply the card room feeds. The floor apron of the secondary magazine feed and the lattice apron start and stop through electrical controls actuated by the amount of stock required by the card feeds.

picking, and from this point is discharged into blow bins in the card room. In a case where an additional layering is required or desired, the stock is by-passed around the picker through a fan for a second layering rather than give it three pickings.

The magazine bins are of such a size to permit the entire batch to be brought to rest between each layering and picking sequence, thus assuring that all of the many components are never separated from the total blend between relaying and picking operations. The batch system discharges the blended material to a baling press or to bins in back of the card feeds. This baling method is gaining favor in many mills handling small batches in many colors. It permits the picker house to operate at maximum efficiency and capacity without regard for card room tie-ups or change-overs; the bales being made for storage rather than to meet the daily hourly needs of the card room.

Labor Savings. The results obtained by these two systems of blending are effective in reducing direct labor as compared with the older conventional types of wool blending. In cases where studies were made of these two systems, the direct labor was reduced 50%. This saving alone in direct labor paid for the equipment in eighteen months in one case and fourteen months in a second case.

Better Blending. There are other savings besides the direct labor. These are the results of the better blending obtained in these two systems. The distribution of fiber of the various components in the older system varied 10%; whereas in the new system the variation was but 1 to 1½%.

Spinning Efficiency. This improved distribution of fiber resulted in savings in spinning costs which were measured through the medium of the number of ends down per thousand spindle hours. Under the older system of laying blends, the mill averaged about 105 ends down per thousand spindle hours as against 39 for stock blended with the new system. The mill is now trying to evaluate which is the greater saving—the increased spinning room efficiency or the possible saving that would accrue from using lower priced components or less of the higher priced long carrying fiber components.

The same basic principles of these blending systems are also available and are in use for the blending of grease wools prior to scouring and the leveling of grades of wool after scouring or, in the case of colors, the evening of the various shades as stock is received from the dye kettles.

Systems have been arranged also to suit conditions in wool felt mills, garnetting plants, and in the cotton spinning mills where blends of wool and synthetic fibers are made or where blending is done with two or more kinds of synthetics.

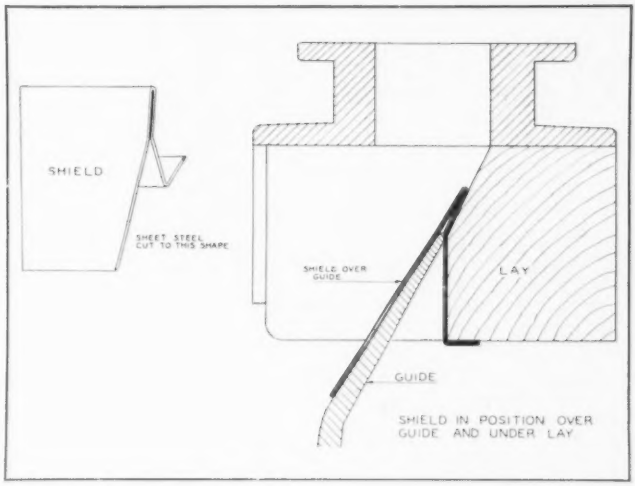
These units can be arranged so that they may be at right angles or, as in some cases, on different floors of the building.

Bobbin Guide Protector

for bobbin changing looms

Small metal shield designed by loom fixer prevents wear caused by metal rings on quills striking the bobbin guide.

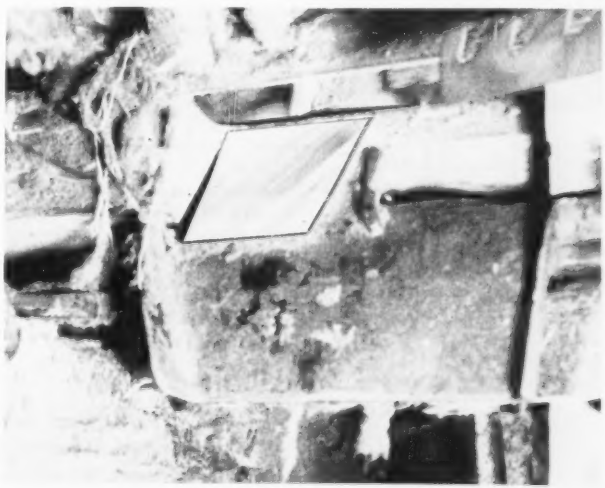
A LOOM FIXER at Cone Mills Corporation's White Oak Plant, in Greensboro, N. C., thought that something should be done about the amount of time, trouble and money being spent to replace the guides over which the empty bobbins pass when full bobbins are transferred into shuttles. The metal rings on the heel of the bobbin strike against this guide every time a bobbin is transferred. It does not take long for a bad notch to wear into the guide, and it has to be replaced.



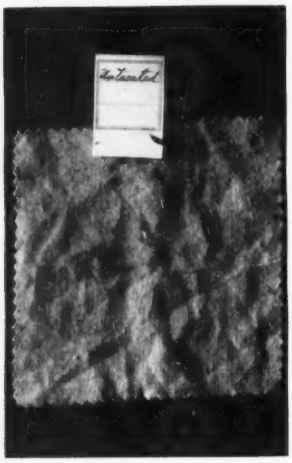
SHEET STEEL is cut and bent to shape indicated at left. Right, cross section of lay at battery end, showing way shield is attached.

Since all of the wear is in the one spot where the metal rings hit, Ed Morris, a loom fixer, conceived the idea of shielding this spot with a protective piece of sheet steel, which can be replaced easily and cheaply as it wears. Using 15 gauge sheet steel, he cut a small shield to the shape shown in the accompanying sketch. The way in which this fits over the guide and under the lay is shown in the cross-section drawing of the battery end of a lay.

The idea has saved both materials and labor at Cone Mills Corporation, and Mr. Morris was awarded a cash prize under the company suggestion system.



SHIELD IN PLACE on loom which has been in service for many hours.



RECOVERY. Rapid recovery from wrinkling is demonstrated by this spun rayon fabric treated with urea formaldehyde (below). Untreated sample is shown above.

Finishing with the

By J. J. BERNARD

Rohm & Haas Company

OF THE MANY factors responsible for the great expansion of viscose rayon fabrics and their present position in the textile industry, one of the most important was the discovery that the properties of rayon could be improved by treating the fabric with the monomeric condensation products of urea and formaldehyde.

This treatment, which imparted a greatly improved ability to recover from wrinkling, together with resistance to stretching or "bagginess," was first offered to the textile finishing industry as a process which required the industrial plants to prepare the condensate for their use.

Chemical companies saw the need for a prepared condensate, and began to supply material produced under carefully controlled conditions to strict specifications. This was a major step forward, relieving the finishing plants of the hazards and headaches of chemical manufacturing so that they might devote their energies to problems in the finishing field.

The participation of the chemical companies in this development has continued from the beginning in the 1930's to the present time, and has resulted in substantial improvement in the chemical products and a diversified group of materials which are used for varying effects. These now include water soluble polymeric products which are used to produce stiffening and to increase strength where fiber bonding is required, and also materials having greater resistance to washing than the original methylol urea type.

Borghetty Paved the Way. The original discovery of wrinkle resistance was soon followed by others of importance, including those of shrinkage control, durable glazing, and embossing. The discovery of H. C. Borghetty that resins have the properties of bonding yarns, and thus preventing or reducing yarn slippage, is recognized as a major step forward in the development of resin finishing[1]. Applications of urea resins in textile finishing are given in the accompanying box.

Formaldehyde Research Continues. In addition to developing the urea formaldehyde line of chemicals, various investigators have explored other possibilities for the chemical improvement of viscose rayon fabrics. Work with formaldehyde as a modifying chemical preceded the urea formaldehyde discovery, and has never been entirely abandoned. Formaldehyde reacts with cellulose molecules, joining them through methylene bridges (at acid pH under dehydrating conditions). This reaction is difficult to control according to most processes, because the reaction with the cellulose must compete with removal of the formaldehyde from the fabric by volatilization. Furthermore, the resultant formaldehyde fumes present a problem with regard to plant personnel.

Commercially Important Applications of the Urea Resins are

Rayon Fabrics

(1) shrinkage control
(2) wrinkle resistance
(3) stretch resistance
(4) anti-slip finishes
(5) durable hand modification

Cotton Fabrics

(1) durable embossing
(2) durable glazing
(3) wrinkle resistance
(4) shrinkage control

These resins also impart the following desirable properties:

(1) improved rot resistance
(2) improved wet and dry tensile strength (to rayon only)
(3) lower water absorption - quicker drying
(4) higher wet abrasion resistance and durability to laundering
(5) improved resistance to fraying in laundering
(6) improved washfastness of direct dyestuffs

Urea Formaldehyde Resins

The formaldehyde-cellulose reaction joins adjacent cellulose chains with a very stable linkage. Rayon treated in this manner possesses greatly reduced swelling properties and improved dimensional stability. Formaldehyde treated rayon has exceptional durability to washing, and the shrinkage control imparted approaches ultimate permanency.

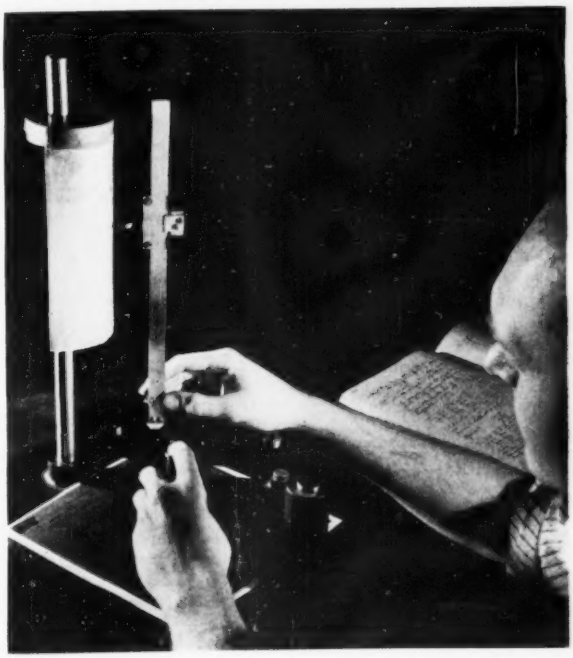
A fairly recent modification based on the use of formaldehyde is the Avcoset process, in which the cloth is treated with a solution of formaldehyde and an alkali soluble cellulose ether. The use of dialdehydes, such as glyoxal, received fairly recent attention in the Sanforset process; this material is less volatile than formaldehyde, therefore easier to apply.

Though used for shrinkage control, neither formaldehyde nor glyoxal has been used for the production of wrinkle resistant finishes. At concentrations high enough to impart wrinkle resistance, these compounds usually have an adverse effect on the tensile strength, tear strength, and abrasion resistance of the cloth.

Ketone aldehyde products and melamine formaldehyde resins have attained commercial use, the latter to an important degree. The melamine products are similar to the urea formaldehyde in application and in properties imparted to rayon. They are used to a considerable extent for this purpose, although urea formaldehyde still predominates.

Nitrogenous Resins. The advantages of nitrogenous formaldehyde resins over some or all of the other methods mentioned are:

(1) low cost
(2) ease of application
(3) consistent results
(4) satisfactory strength and wearing properties in the finished fabrics.



DRAPEMETER is used by research chemist to check the effect of polymeric resins on fabric stiffness.

On the other hand, some problems must be considered relative to the use of nitrogenous resins. The resin treated fabric has the property of removing chlorine from the bleaching solution, and subsequent ironing may cause degradation of the fabric[1]. While this reaction may be reversed to free the fabric of chlorine by immersing the bleached cloth in a solution of reducing agent, this is not a customary practice in either the home or commercial laundry.

Many finishers have adopted the successful and practical expedient of applying urea or melamine resins only to colored fabrics, which are much less likely to be bleached than white goods. However, chlorine resistant types have been developed which provide a measure of protection against chlorine damage.

Methylol Urea. Of the many available urea products, the one of chief importance is methylol urea, produced by the reaction of urea and formaldehyde. In the preparation of methylol urea for textile purposes, the mol ratio of formaldehyde to urea is usually in the range of 1.2 to 1.7. It requires storage below 50 F to maintain the monomeric state.

The methylol urea type was the first developed for textile use, and is still more widely used than any other textile resin. All things con-

sidered, no other commercial product has greater value for the specific purpose of imparting combined wrinkle resistance and dimensional stability to spun viscose fabric, and this is still the largest application of urea textile resins, although others are also very important.

Other resins of considerable use are obtained by reacting urea with higher mol ratios of formaldehyde and under specialized conditions to produce products which are partially polymerized, but which still retain water solubility. These are frequently used in conjunction with the methylol urea type, and diffuse only in part to the interior of the viscose rayon fiber.

These products are used to impart a crisp handle; or in low concentrations, a feeling of resilience and wooliness. They improve dimensional stability, but they do not improve wrinkle recovery. High wrinkle recovery requires that the yarns be multifilamentous in character. Thus, fiber bonding resins which reduce the multifilamentous nature can, if applied in high concentration, actually decrease the wrinkle recovery. Products of this type are usually storage stable.

In addition to methylol urea and water soluble polymers there has been developed a material* having quite unique properties. Though somewhat similar chemically to a resin, it is entirely monomeric and remains so during storage. This material imparts much better shrinkage control to rayon than the urea formaldehyde resins, but unlike an aldehyde it also improves the wrinkle resistance and is non-volatile at application temperatures. In addition, it is comparatively resistant to chlorine bleaching. It has been used to improve the wrinkle recovery of cotton fabrics, and is a standout material in durable glazing and embossing, because of its durability to washing.

Catalysts for Curing. After application to the fabric, the resin must be "cured;" that is, changed to a higher polymer which is water insoluble. An acid pH is the catalytic condition which is required by the urea formaldehyde resins, although curing under alkaline pH is possible with the methol urea type[3].

A number of acid catalysts have been used in commercial production, including such organic acids as lactic, tartaric, and citric. Certain products containing salts of strong acids and organic amines have attained some popularity; these appear to be useful in maintaining the strength properties of the treated fabric.

Probably the most commonly used catalysts are the ammonium salts of mineral acids; they are extremely dependable and efficient. When they are used, the resin bath usually has good stability, particularly if the bath temperature is controlled. During drying of the fabric at elevated temperatures, however, the ammonium ions combined with formaldehyde from the resin, and the pH of the fabric drops sufficiently to promote curing of the resin.

*Rhonite R-1

General Application Procedure

The operations in processing with urea resins are:

(1) The fabric is prepared by scouring to remove oils and sizes.

(2) The prepared fabric is padded with a solution of resins plus catalyst and other additives.

(3) The treated fabric is dried in a tenter frame to the desired width.

(4) It is then baked in an enclosed oven or tenter.

(5) After-washed in an alkaline detergent solution, and rinsed.

(6) Dried in a tenter frame to the desired width.

Dyes. Adequate preparation of the goods is a prerequisite. They must be desized and scoured so as to present a thoroughly clean and absorbent fabric, and special consideration must be given to the colors used in dyeing the fabrics. Vat dyestuffs are particularly recommended, as they show least color change and excellent color fastness after resin treating. However, certain direct dyestuffs are widely used on goods to be resin treated, with excellent success.

The shade change of direct colors should be predetermined, so that modifications can be made if necessary in the dyeing formulation. Most direct dyestuffs are much improved in washfastness by treatment with thermosetting resins.

The effect on lightfastness depends on the particular color and on the type of resin; urea formaldehyde will improve some and harm others. Of recent years, some finishers use color fixing agents in their resin treating baths, thus obtaining good lightfastness and washfastness of direct colors.

Padding. The resin products are dissolved in water, and a wetting agent and a catalyst are added. This solution is applied by padding to the fabric, and a heavy pressure is used to reduce the wet pickup of the fabric to a low level; variations in the resin content of the fabric may be obtained by adjusting the concentration of the resin solution.

The temperature of the resin treating solution is best kept below 90 F, and satisfactory bath stability is usually obtained at pH 5.5 - 7.0. Below pH 5.5 difficulty may be encountered. Certain treating baths having low stability may be improved by reducing the temperature of the bath to the lowest practical point; for example, the pad liquor box may be surrounded by a jacket containing a coolant.

Curing. The drying and curing operations are generally, although not always, carried out as separate operations. Usually, drying is done in a tenter frame, which sets the fabric at the desired width, after which it is cured in any of several types of ovens including loop dryers and housed tenter frames capable of high temperatures.

Typical exposures for curing are 10 minutes at 290 F, 5 minutes

at 300 F, and 3 minutes at 310 F. These, of course, may be adjusted, depending on the weight of the fabric, and the curing may be varied within reasonable limits with satisfactory results. The various resins also vary with regard to speed of cure. The drying and curing equipment should be provided with adequate exhaust facilities to carry off steam and formaldehyde fumes.

Odor Problems. After the fabrics have been cured, they should be after-washed. Two odor problems affect resin treated fabrics; amine odor appears to be readily prevented by alkaline scouring. However, even scoured goods will often give off formaldehyde odor when they are steam pressed.

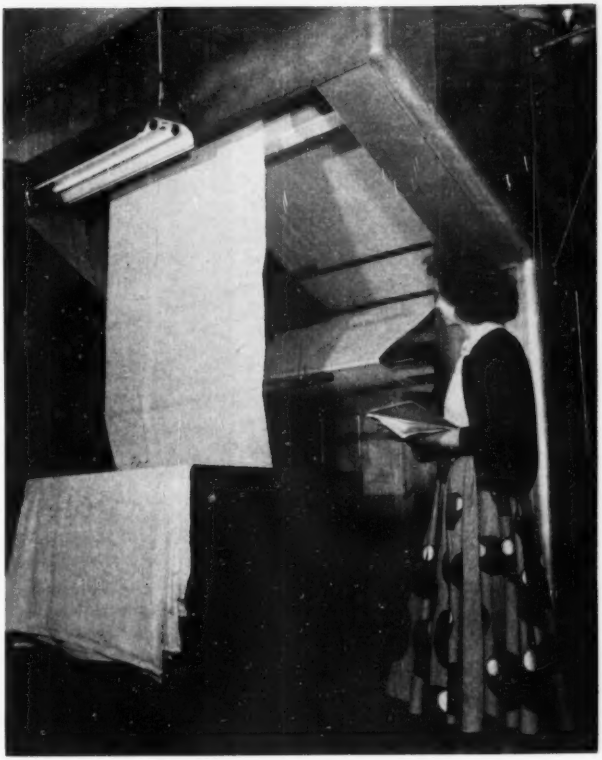
We have recently observed that this tendency can be overcome, at least in part, by scouring the fabric in hot water (140 F) prior to the alkaline scour. This would be done, for example, by using water only in the first box of a continuous washer. The "pre-scour" is actually mildly acid, because of the pH of the fabric, and appears to be very effective in removing formaldehyde. There is some possibility of resin removal during this initial step, and the time and temperature of the scour and the pH of the solution would require control.

The goods, after the "pre-scour," would be washed in the usual manner with synthetic detergent and alkali. A scouring temperature of 140 F is satisfactory, with sufficient soda ash to maintain an alkaline bath; and the fabric should be then thoroughly rinsed before drying.

Wrinkle Resistance. A properly resin treated viscose rayon or cotton fabric will be less wrinkled after wearing than an untreated fabric. Some authorities feel that this phenomenon is more aptly termed "crease recovery." The best performing fabrics are soft and flexible; they do not "resist" the physical forces which fold the fabric and cause wrinkling. However, such fabrics quickly "recover" their original form after these forces have been removed.

On the other hand, the individual fiber in a folded or wrinkled fabric is subjected to a certain stress, depending on the type of yarn, the construction of the fabric, and the type of fold. If this stress is sufficient to distort the untreated fiber to the extent that permanent deformation takes place, this fiber will contribute to a wrinkle in the fabric.

But if the fiber is resin treated, it will be more difficultly extensible, and will not elongate or deform as much during the application of stress. Instead, it will attempt to dissipate the stress by changing its relative position within the yarn. Thus, not only does it have the advantage of improved recovery from deformation, but also some resistance to deformation. Some highly wrinkle resistant fabrics show almost no crease marks as soon as the creasing force is removed.



THE TREATED FABRIC is cured in an enclosed chamber to accelerate reaction of the resin.

In the several test methods, wrinkle resistance is tested by creasing the fabric under specified conditions, and measuring the degree to which the test fabric returns to its original flat state. In the well known TBL method, the creased specimen is required to recover against gravity, and the recovery is measured as the distance between the opposite ends of the creased specimen. In this test, differences between the specimens in the higher range of crease recovery are minimized, because in this range a considerable change in the angle of the fold causes only a slight change in the distance between the ends of the specimen. More recently developed test methods measure the angle of the fold; these provide a much more realistic picture of the results.

A typical formulation for imparting wrinkle resistance to a

spun rayon suiting fabric is:

250 lb Rhonite 610
20 lb Rhonite 414
4 lb Catalyst D
4 oz Triton X-100

made up to 100 gallons

This is applied by padding at 90% wet pickup. The fabric is tenter frame dried, cured, scoured, and frame dried.

Dimensional Stability. Urea formaldehyde resin treatments generally produce resistance to shrinkage, which is a result of the reduced hydrophibicity of the treated fabric. In addition, these treatments impart to the fabrics increased resistance to stretching, due to a reduction in fiber extensibility. Thus, garments made of resin treated rayon have less tendency to stretch out of shape or become "baggy." The following formulation is typical for an all viscose shirting fabric:

120 lb Rhonite R-1
2 lb Catalyst A
¼ lb Triton X-100

made up to 100 gallons

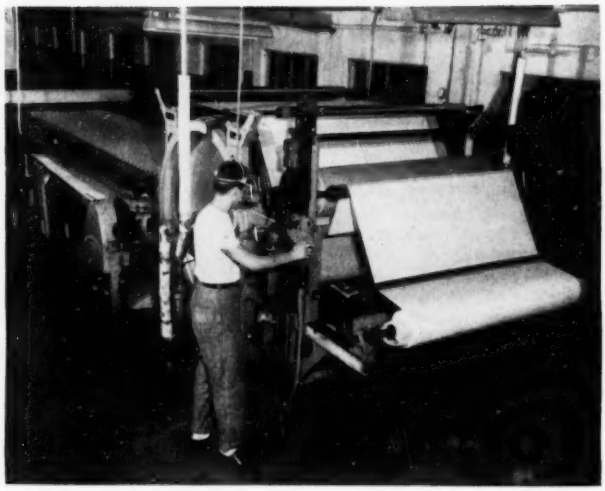
The drying, curing, and afterwashing are the same as for the wrinkle resistant finish.

Durable Mechanical Effects. Thermosetting resins are used to "set" mechanical effects in cotton fabrics. These mechanical effects are most often produced by hot calendering and may include friction glazing and embossed patterns. Such effects are described in patents assigned to Jos. Bancroft & Sons. The resins will also set pleats in cotton and rayon fabrics if desired. It is of interest to note that embossed fabrics may be "tipped," using a color paste and roll to produce further novel effects.

The usual procedure consists of impregnating the fabric with resin solution, partially drying, imparting the mechanical effect, and curing. A typical formulation is:

80 lb Rhonite R-1
10 lb Rhonite 414
8 lb Sulfonated softener
8 lb Catalyst G-8

made up to 100 gallons



FABRIC IS DRIED on a tenter frame after impregnation and again after final washing.

Miscellaneous Finishes. Urea formaldehyde resins may be used with color fixing agents or with durable water repellents in one bath treating operation. Some color fixing agents are acidic, or are dissolved in acidic solutions. Therefore, they often do not require the addition of catalyst to the treating solution.

Water repellents of the Zelan type (stearamidomethylpyridinium chloride) decompose during the curing operations and liberate pyridine and hydrochloric acid. As a result, the fabric develops an acid pH, and no catalyst is ordinarily required. In the usual application of these to cotton fabrics, sodium acetate is used as a buffer. However, in test applications of urea formaldehyde and Zelan to spun rayon fabrics this buffer has been omitted with apparently good results.

Thermosetting resins also may be used in conjunction with silicone water repellents.

Application of Resin with Starch. Although starch is normally a fugitive finish, it may be made water resistant and durable by combining it with urea formaldehyde resins. In this case, the resin reacts with the starch to insolubilize it.

The starch mix is cooked as usual, and the resin added immediately after cooking, with thorough mixing. The mix is allowed to cool to application temperature, at which time catalyst is added, and the solution is applied to the fabric. Drying, curing, and afterwashing follow.

A typical mix for stiffening a cotton interlining fabric is as follows:

50 lb Starch
75 lb Rhonite 414
1 lb Catalyst D
¼ lb Triton X-100

made up to 100 gallons

Abrasion Resistance. This property, as measured by most testing machines now in use, is affected in one way or another by thermosetting resins. It has been observed that those resins which penetrate the fiber (thus, those which are used for wrinkle resistance) will generally lower the apparent abrasion resistance. It has also been observed that higher polymer resins which cannot penetrate the fiber, and which are primarily used for stiffening, when used in low concentrations can improve the apparent abrasion resistance.

Where loss in abrasion resistance occurs, it is believed that this is partly due to inability of the fiber to yield under stress. An "inability

Believe it or not! Chlorophyll Lining Fabrics

The recent trend toward the utilization of chlorophyll in all types of products ranging from toothpaste and chewing gum to cigarettes and dog food, has now been extended to textiles. According to reports, a new chlorophyll finish is being applied to a "substantial yardage" of rayon and acetate lining fabrics.

Used on linings for men's and women's clothing and luggage and shoes, the new finish is said to help prevent perspiration odors as well as musty odors resulting from storage. Lasting qualities of the finish are now under test.

It was uncanny that this announcement should come just a few days after publication of the June, 1952, issue of the "Industrial Bulletin of Arthur D. Little, Inc." which contained the statement that "a field in which little research has as yet been reported is the potential market for chlorophyll compounds for controlling odors in industrial processes or end products."

An extract of the Bulletin's article "Green Pastures" follows:

The present boom in demand for products containing chlorophyll is expected to push sales of such items to $50 million this year. Although the water-soluble chlorophyll derivatives have been known for some time to the medical profession for their healing properties, their chief use has been in wick-type room deodorants and as a coloring or masking agent in soaps.

Early last year, however, chlorophyll, or, more correctly, chlorophyllin, was incorporated in a wide variety of personal deodorant compounds, and by the end of the year sales had reached $22 million. Now there are 40 or more companies listing well over 100 products containing chlorophyll derivatives.

Four companies are now producing chlorophyll, mainly by solvent extraction from alfalfa; a ton of alfalfa yields four to eight pounds of chlorophyllin, which sells for $85 a pound. The four producers are said to have a total capacity of 90,000 pounds, ten times the 1949 production, and capacity for an additional 30,000 pounds is expected to be ready next month.

As yet, pure chlorophyll itself has not been recovered on a commercial scale, and its actual value as a deodorant or germicide is virtually unknown. Since natural chlorophyll is insoluble in water, the products now on the market contain a form of chlorophyll which has been chemically modified to render it water-soluble and stable to heat and light. The products generally contain a sodium-copper - chlorophyllin compound; as yet the role of the copper in deodorization and germicidal activity is unexplained.

While most recent research has emphasized the development of deodorant formulations to meet market demand, basic research continues to seek the reasons for chorophyllin's apparent therapeutic qualities.

The deodorizing characteristics of chorophyllin compounds were discovered in the course of their investigation as an adjunct in the treatment of anemias. It is known that chorophyll is chemically similar to hemoglobin in the blood; studies in this area which go back to the original work on blood regeneration have led to new products for treatment of anemias.

The elimination of body odors by taking chlorophyll tablets internally still remains a much-debated subject. While it appears that oral odors may be greatly reduced, there is still wide disagreement concerning control of perspiration odors.

It would appear at the outset that science has surpassed nature in the use of chlorophyll's properties — look at the goat; he eats alfalfa all day but his odor is ever present.

to yield" may also be produced by folding a fabric, for example at the collar or cuffs of a garment. The fibers in the external area of the fold are less resistant to wear. Unfortunately, they are also subject to much abrasive contact.

Other factors must be considered. Obviously, a polymeric resin does not improve the capacity of the fiber to yield under stress, yet it can improve the abrasion resistance. This may be due to the resin providing the fiber with a harder, more abrasion resistant surface. The nature of the fabric surface is important, a smooth surface fabric having higher abrasion resistance. The abrading load applied to smooth surfaced fabric is distributed over a greater number of individual fibers than the load applied to an irregular surface. Thus the load per fiber is less in the former case.

A recent article discloses that the effect of wrinkle proofing treatments on abrasion resistance depends on the stress applied during testing. At high stress loads the effect of internal resins is adverse, at very low stress loads the opposite effect was noted'.

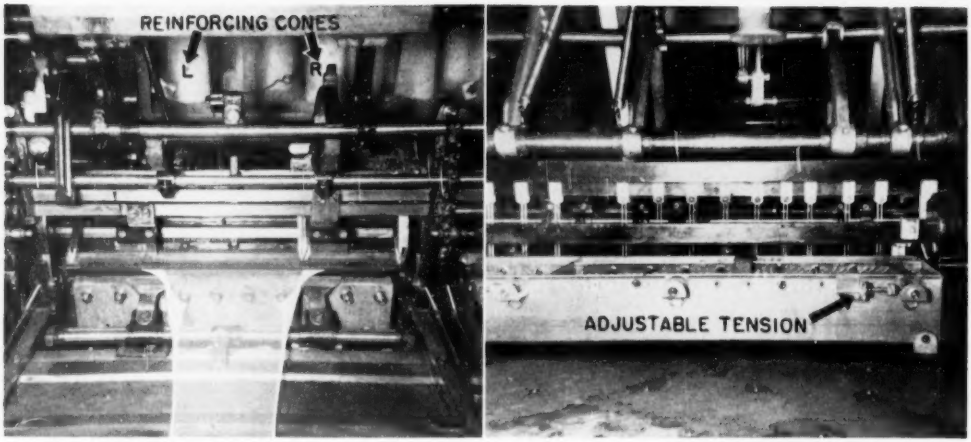
While the wrinkle resistant treatments may decrease the dry abrasion resistance, it should be borne in mind that the improvement in wet strength of the rayon fiber is such that the wet abrasion resistance is improved. This is important in garments which will be laundered.

Resin Retention. One of the most useful tools to the finisher is the test for resin retention. This test shows the degree of resin fixation, from which can be estimated the durability. The test samples are first boiled in soda ash solution, and the change in weight is measured by common gravimetric methods. They are then boiled in O.1N HC1 solution, and the change in weight is again measured. The extractions may be carried out on separate samples or on the same samples. The material removed in the soda ash treatment is considered to be "unfixed" while the acid treatment removes all resin.

The common calculation given for resin retention is:

$$\frac{\text{fixed resin} \times 100}{\text{total resin}} = \% \text{ Resin Retention}$$

(1) U. S. Patent 2,050,156
(2) Nuessle, A. C. and Bernard, J. J. Am. Dyestuff Reptr 39, 396 (1915)
(3) Gagliardi, D. D. Am. Dyestuff Reptr. 40, 769 (1951)
(4) Gagliardi, D. D. and Nuessle, A. C. Am. Dyestuff Reptr. 40, 409 (1951)



TWO CONES OF YARN are used simultaneously in reinforcing the foot, and there is likely to be unevenness among stocking blanks produced on the same knitting head. The adjustable tension (right) is used on the reinforcing thread to tighten the long side of the foot in instances where leg selvages are even and foot selvages are more than ¼" longer on one side than the other. The application of tension on thread results in a smaller stitch, thereby shortening the long side of the foot.

When hosiery heels do not match,

Are Seamers Always at Fault?

The first installment of a two-part article dealing with the problem of uneven selvages in full-fashioned hosiery production.

By JOHN GIFT

IN MANY full-fashioned hosiery mills, personnel in the knitting departments assume the attitude that . . . "the seamers are at fault" . . . when a high percentage of irregulars is attributed to poorly matched heels. The attitude is not without some justification; however, should the knitting department make an impartial analysis of selvage lengths with the proper selvage length testing equipment, undoubtedly the results would be somewhat surprising.

One of the most common methods used by some knitting departments to discredit a complaint about uneven selvage lengths is as follows: Let us suppose that the complaint involves a machine having 32 knitting heads. In a check test, instead of using one stocking blank from each knitting head, which would be the proper thing to do, invariably they will use 32 stocking blanks from the same head. The seamer, to whom the set of test blanks is given, usually completes the set and finds that some of the foot selvages are even and others are uneven.

Upon reporting the test results to the knitting department, the seamer is often confronted with the statement that, inasmuch as every blank in the test set came from the same knitting head, test results on all of the selvages should be the same. The seamer is confronted with a problem in explaining why some of the selvages are even and some are uneven, and, becoming dismayed, does not pursue the matter further. Consequently the knitting department feels justified in assuming that the seamers generally are responsible for the high percentage of heel-match irregulars.

In conducting the forementioned test, the knitting department may be entirely honest in the belief that test results proved the seamer to be at fault. However, a fact often overlooked is that two different cones of yarn are used simultaneously in reinforcing the foot, and there is a great possibility of unevenness among stocking blanks produced on the same knitting head.

If the knitting department had employed selvage length testing equipment to measure the selvage length of each of the stocking blanks from the same knitting head, the variations would have been readily evident. One reason for the variations is the difference in draw-off tension between the two cones. The difference in cone tensions cannot be avoided, and a maximum of ½ in. variation may be produced between the left and right selvage lengths of the foot.

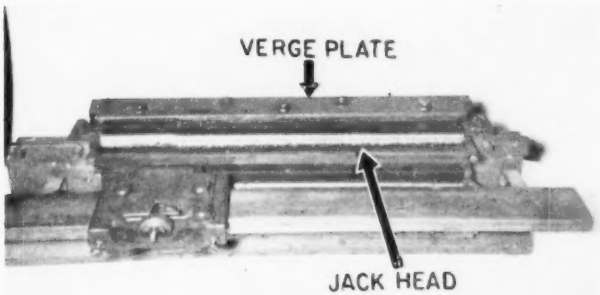
Naturally, the question arises: what can be done? The solution is as follows: the knitting heads should be adjusted so that the variation in selvage lengths is balanced between the right and left side. For example, the ½ in. (maximum) variation from a properly balanced knitting head will be as follows: the left foot selvage will be ¼ in. longer than the right selvage in some stocking blanks, and the right selvage will be ¼ in. longer than the left selvage in other blanks.

In an improperly balanced head the ½ in. (maximum) variation may be as follows: the left foot selvage may be ¼ in. longer than the right selvage in some blanks, and the same side (left) may be ¾ in. longer than the right side in other blanks. In view of the foregoing condition, a seamer may easily match some heels and find it almost impossible to match other heels from the same head.

The most satisfactory method for overcoming the difficulty is to adopt a program whereby the selvage lengths are periodically measured and recorded to find which knitting heads are producing selvage length variations which are fugitive to established tolerances—¼ in. longer on left side to ¼ in. longer on right side. It is sometimes necessary to use an adjustable tension on one of the foot reinforcing threads to balance the selvage length variations without disturbing the selvage length of the leg in the same knitting head.

The knitting department is not responsible for all bad heel matches, and a subsequent article will discuss seamers and their attitude toward the knitting department. (*To be continued*)

THE VERGE PLATE and jack head are adjustable, and one or the other (or both) should be properly adjusted to correct uneven selvage lengths.



A Look at the Modern Wool Card

The Textile Engineering Division of the American Society of Mechanical Engineers was recently given a glimpse of what is to be expected in the modern wool card by Arthur W. Reynolds, Davis & Furber Machine Co. Automatic card feeders, through alterations in hopper, spike apron, and compensator design (extended bottom aprons, large size wool reservoirs, demand feeding of rising spike apron, and varispeed spike apron drives) have brought over-all weight variations to a minimum, Mr. Reynolds pointed out.

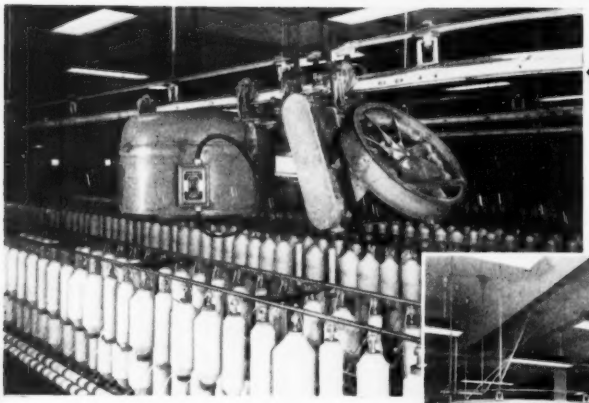
Diagonally slung weight pans assist in reducing variations across the width of the card, while the high cost of operation of the automatic feeder has been lowered by automatic and semi-automatic means of feeding reserve hoppers.

Mr. Reynolds asserted that real economy can be gained from standardization of the metallic breast in size of cylinder, burr cylinder, workers, and strippers. Variations in processing of wools can be taken care of by limited changes in garnett wire winding of the rolls, opportunities for roll settings, and variable speed devices to alter breast speeds without stopping the card.

There is a need for properly designed grids suitable for adjustment, bar-opening sizes, ease and simplicity of removal for cleaning, he said. This will increase the web or roving yield per pound of stock fed to the carding machine.

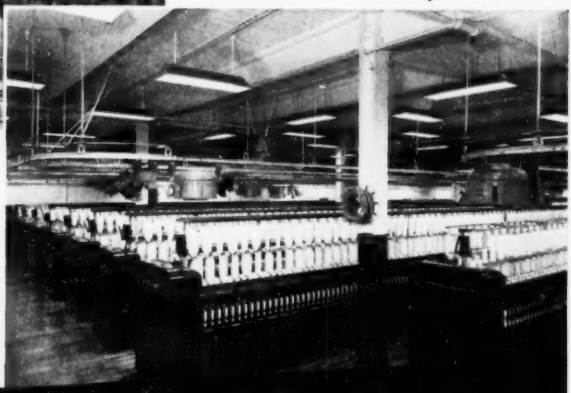
It is probable that card clothing, the settings and speeds of the wound card rolls, and the care and maintenance of the card clothing largely control carding developments toward greater quality and quantity production. There is vital need for an improved condenser, which will be simpler, easier to tend and adjust, and less expensive to operate.

One of the newest card drives is the "soft" start type of motor which eliminates clutches or fluid couplings in variable speed, synchronous drives.



Cleans Up—Cleans Down
For clean ceilings and clean frames.

How do your spinning rooms compare with this for cleanliness? Photo taken during normal operations.

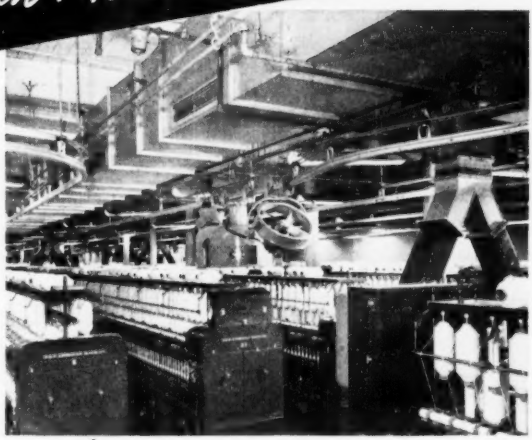


STANDARD EQUIPMENT FOR *Really Clean Mills*

Overhead cleaning is recognized today as standard practice in mills producing high quality yarn. It is almost axiomatic that a thoroughly cleaned spinning room will produce clean yarn.

American MonoRail Automatic Cleaning for over and under the frame and for ceiling cleaning will prevent lint accumulation, produce better running work, reduce costs, and increase mill efficiency.

Let an experienced engineer consult with you on your cleaning problems. He will also be glad to talk with you about your handling problems.



Note clean ceiling even over air duct. This mill no longer "blows-down" ceilings.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

"Labor Troubles"

are frequently nothing but

"Monopoly Troubles"

"Every step in the direction of destroying competition is a step in the direction of destroying the essence of the genius of America"

By RINGGOLD ARDEN

AS THIS is written* the steel strike is still costing us the loss of about 260,000 tons of steel a day, and from day to day throwing out of employment added thousands of people, as first one plant and then another must close down for lack of raw materials. The developments in this strike emphasize more and more clearly the fact that in every big strike there is only one fundamental issue;

Shall a property be managed by its lawful owners or by the people those lawful owners have hired to work for them?

All of the other issues are merely facets of this one overriding issue.

The big stumbling block to the settlement of this strike seems to be the demand for a union shop, which is the device by which the shackles are forever riveted onto the employer. This gives the union a veiled, but none the less effective, control over a great many of the essential functions of management.

Under the union shop arrangement, if there is any rank and file dissatisfaction with the harsh rule of the monopolistic overlords of labor, the dissident can simply be expelled from the union, which automatically expels him from his job. The union has protected itself so that management has no right whatever to discharge professional troublemakers who make life miserable for management, but the union can get rid of what it considers to be troublemakers in the persons of individuals demanding the freedom of action guaranteed under our Constitution and thereby dangerous to the union.

So far, the managements of the steel companies have stood firmly against this final surrender to the labor unions. They have apparently capitulated on the question of money, but are not willing to capitulate on surrendering complete control of their businesses.

The union leaders of course laugh at the idea that this union shop is anything injurious to the employer, but it must be tremendously beneficial to the people who run unions or they would not make such a desperate issue of it and persuade their people to sacrifice so much to gain this concession from management. Anything to which the labor tycoons are so fanatically attached must automatically be injurious to the employers whom they systematically seek to victimize.

Unhappily for the welfare of the country, it is not the employers of labor who are victimized in these inflationary compromises of strikes, but other working people. Any general increase in wages for one large group of monopolistically controlled employees will first result in increased prices of the things those people make, and second, will result in a wave of demands for increased wages for all of the other members of the various big labor monopolies.

That results in what is fatuously referred to as a general price increase, which would be more truthfully referred to as another reduction in the value of money. The monopolists have again feathered their own nests at the expense of the rest of labor.

On June 22, Mr. Murray, the president of the striking steelworkers' union, addressed a group of strikers in Gary, Indiana, and made some statements which might be worthy of analysis. He charged the steel industry with complete defiance of the Wage Stabilization Board with the intention of weakening the steel workers'

*June 25, 1952.

SAVES $4,000 A YEAR BY SWITCHING TO SUNOTEX PROCESS AID

A Midwest mill making fine-quality fabrics was well satisfied with the process aid it sprayed on wool during the picking operation. But like every alert textile manufacturer, this company was continually on the lookout for ways of doing things better. That's why it gave a Sun representative the opportunity to study its plant operations. When the Sun man said he believed that Sunotex WO-410 would do as good a job at a substantial saving, the mill decided to find out by running production tests.

The test run proved convincing, and the company adopted Sunotex WO-410. In the six years which have passed, savings of about $4,000 a year have been realized. Nevertheless, several other promising process oils have been tested. Of these process oils, those which performed as well were far more expensive, and those which were cheaper per gallon proved to be inadequate. Recently the plant superintendent said: "Sunotex WO-410 has performed with 100 percent satisfaction during the entire period of use in our plant and has definitely proved to be the least expensive process oil that will do the job properly."

For complete information on Sunotex WO-410 and other Sun textile-process aids, use the coupon below.

REPLACES COSTLY AID. The process aid formerly used by this manufacturer of fine-grade woolen fabrics did a satisfactory job. The company switched to Sunotex WO-410, however, after a production test proved it could equal the performance at almost half the price.

Dept. TI-8
Sun Oil Company, Philadelphia 3, Pa.

I would like to consult with a Sun representative in regard to_____

_____

Name_____

Title_____

Company_____

City_____ Zone_____ State_____

TECHNICAL ASSISTANCE AVAILABLE. Sun's engineers are at your service for consultation on textile-processing and lubrication problems. It will pay you to utilize their broad textile experience.

MIXES WELL. By adding Sunotex WO-410 to warm water and agitating vigorously, the mill easily obtains a very stable 4:1 emulsion. This means even application and unvarying fiber protection.

SCOURS OUT COMPLETELY. No Sunotex WO-410 remains after scouring. Therefore finished cloth is never "cloudy," never has a disagreeable odor. Also, the scourability of Sunotex assures level dyeing.

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union. He accused the six major steel companies with forming a "coalition" to not only fight the union's demands, but to intimidate smaller companies into remaining in line.

In other words, the steel companies were trying, as nearly as the law permits, to do exactly what the union was doing.

The union was presenting a unified front to force the steel companies to accede to its demands. That the steel companies presented a unified front in resisting these demands seems to the queer mentality of a labor leader to be somehow wrong.

He also stated that much of the industry was controlled by banking interests which had no knowledge of, and less interest in, the needs of steelworkers for better wages and working conditions. Since the steelworkers are probably in the upper 10 per cent of American wage earners, it is certain that they are not as badly in need of better wages as many of the other 90 per cent of American employees.

If the steelworkers are made better off, these other people are automatically worse off, because if no steel price increase occurred, the money the steel companies used to raise the workers' wages could be applied to a reduction in the price of steel to benefit everybody, and of course if steel prices went up, it is pitifully obvious that everybody else is kicking in to furnish better wages for people who are probably making more than the ones doing the kicking in.

With further reference to the unified front of the six major companies, Mr. Murray declared, "I refer to it as a conspiracy against the people of the United States, against our government, and against the workers employed in the steel industry." What about the conspiracy of the steelworkers to get what they want? Why is the steelworkers' conspiracy desirable, and the employers' conspiracy to resist the steelworkers undesirable?

Mr. Murray went on to accuse the steel industry with spending large sums of money to disseminate "slanders" in a campaign of misrepresentation of the union's position. Mr. Murray did not point out any of these "slanders" or refute them, and the advertisements which the steel manufacturers have published in the papers this writer has seen certainly do not appear to be slanderous. They seem to present a reasonably logical defense of the position taken by the steel companies. Mr. Murray seems to feel that anything hostile to his wishes is wrong, and anything he wants is right. A monopoly always assumes that it is right, and usually can prove it.

WITHIN THE LAST few weeks we have been delighted to notice that after all these years a notable number of the members of Congress have awakened to the *need* for controlling these irresponsible monopolies, and are proposing the only possible remedy, which is cutting them down to size.

We have repeated so many times that the repetition is doubtless tiresome, the fact that if one monopoly is wrong, any monopoly is wrong, and in this fact lies the remedy for the problems caused by labor

Asks $500,000 Damages from Union Which Forced Plant Closing

Westinghouse Electric Corporation has filed a counter-claim in United States District Court against the International Union of Electrical, Radio & Machine Workers, CIO, for $500,000 damages resulting from the recent closing of the Westinghouse lamp plant at Bowling Green, Ky.

In its counter-claim against both IUE-CIO and Local 740, Westinghouse charged that a series of illegal work stoppages was carried on in violation of the national agreement between Company and union which ultimately cost the Company $500,000 and forced closing of the plant.

Operations at the Bowling Green plant had been suspended last August 15 as result of the work stoppages, and over a period of more than four months efforts were made to reach a satisfactory accord with the union, Westinghouse announced. The Company's final decision to close the Bowling Green plant was announced last December 4 when, at a meeting with the Federal Mediation and Conciliation Service in Washington, the union leaders refused to assure discontinuance of the unlawful work stoppages.

"We could not continue putting money into an operation thus doomed to failure," Westinghouse explained.

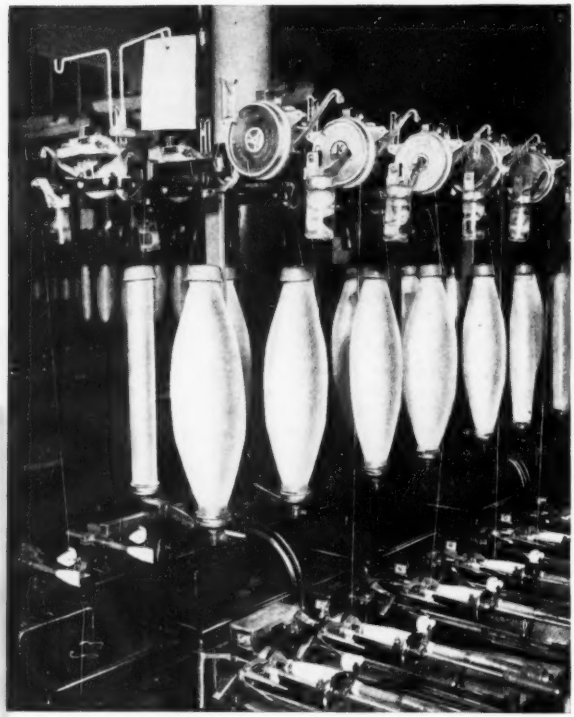
Auto Industry Is Cotton's Best Customer

A near-record post-war total of 9,962,000 bales of raw cotton were consumed in domestic mills in the calendar year 1951, according to the latest edition of the National Cotton Council's statistical handbook "Cotton Counts Its Customers."

Since V-J Day only 1947 saw greater cotton mill consumption and then only by a few thousand bales, the survey showed.

The Council study provides detailed quantity information on cotton uses which account for over 80 per cent of domestic consumption in 1951. It cited automobiles, sheets, shirts, trousers, and bags as the five biggest cotton consumers in 1951.

The most significant gain, the report said, was scored in the automobile market where consumption rose from 780,000 bales in 1950 to 892,000 bales last year. In sheets, consumption increased from 510,000 bales to 561,000; men's shirts from 462,000 to 508,000. In men's trousers, consumption lagged behind 1950, decreasing from 445,000 bales to 385,000 last year. In bags, the number of bales consumed was 2,000 bales below the 1950 estimates.



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how Universal 90 Winders are Tension Controlled at mills weaving nylon fabrics

Ever hear of using Universal 90 Winders to wind from nylon pirns directly to quills? It can be done with Kidde Double Disc Compensators. Kidde Compensators prevent deformed and crushed quills. They control tension *at* bunch and *throughout* the quills, and prevent sloughing off due to soft quills.

Kidde Double Disc Compensators are precision instruments that assure you of precision tension control on all kinds of synthetic yarns. Once they are set, they maintain the proper tension indefinitely.

Write today for full information.

Kidde Double Disc Compensator

10 to 140 grams
or 100 to 300 grams

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monopolies. Labor unions must be cut down to a size which will leave them strong enough to perform any lawful and proper function that a labor union should be allowed to perform for its membership, but not permitted to grow big enough to create a national crisis any time a group of irresponsible leaders who can not be touched by law to pay for the frightful damage they wreak, get ready to wreak it.

Hitler and Mussolini both clearly proved that the ownership of property, was a matter of no consequence unless the right of management went with ownership. Stalin and his associates contend that there should be no private ownership of anything. Hitler and Mussolini condemned this policy, and piously declared that people should be allowed to retain ownership of their property, unless, of course, they became "enemies of the state," which was a handy way of making confiscations feasible where desirable.

Both of these socialist experimenters declared, however, that ownership granted no right to use property for purposes harmful to what they considered to be the interests of the state, and they consequently assumed the functions of management of other people's businesses, and thereby those people retained all responsibility for the disagreeable features of property ownership, but lost control over the income of the property.

Our big labor monopolies are moving in this same direction. These monopolies have repeatedly shown that they feel that a firm's employees have first claim on whatever the firm may make. This was pointed up by the idiotic doctrine that ability to pay should be a determining factor in wage rates. This was a bit of incredible hypocrisy. If, in the present instance, the steel companies grant a 15 per cent wage increase to their employees, the merchants, landlords, and other persons with whom these employees spend their wages might quite reasonably raise all prices 15 per cent on the irrefutably logical grounds that the steelworkers now had ability to pay 15 per cent more, as was unquestionably proven by the fact that their wages had just gone up that amount.

The steelworkers' union would of course denounce this in terms which could hardly be printed in a technical magazine, but the people who set their prices on the basis of the steelworkers' ability to pay would be just as logical in their reasoning as the steelworkers themselves in claiming that their prices should be determined by the ability of the customer to pay.

The country's whole economy was built up on the theory that free competition was the fairest way of determining values and tempting people to take risks to produce values. Every step in the direction of destroying competition is a step in the direction of destroying the essence of the genius of America. By "competition" we certainly do not mean the wild, senseless, dog-eat-dog tactics of irresponsible corporate bodies, unreasonably trying to destroy each other so that the strongest survivor could hope to recoup the losses by swindling his customers. That sort of competition has been almost completely eliminated by the Anti-Trust Laws.

Neither do we approve of just plain stupid competition, in which one business senselessly underbids another one, regardless of loss. We do firmly believe, however, that a system of sane and open competition is the only fair way to determine value, and we can never agree that any form of monopoly control of anything is desirable unless this is a control arising from patents resulting from an invention creating something which never existed before, or unless the monopoly is a natural one, like the telephone system, which is regulated in the public interest.

If the answer to these labor monopoly problems is going to be more government control and more bureaucracy, it will only be a little while until our major industries will be nationalized and we can kiss goodbye most of the great Freedoms that have made life in this country different from life anywhere else on earth.

Form College—Industry Committee on Material Handling Education

In order to make it possible for engineering students to better equip themselves for service in the technology of material handling, 78 manufacturers of material handling equipment (acting through their trade association, The Material Handling Institute) and the nation's 3,000 professional material handling engineers who are members of the American Material Handling Society have joined hands with leaders in the field of engineering education to form an autonomous College-Industry Committee on Material Handling Education.

The committee's work will be dedicated to five objectives:

1. To make available to colleges and other study groups material of recognized quality for use in courses on material handling.

2. To initiate development of new material, not presently available, for use in such courses.

3. To become known as a source and authority on sound good-quality information for material handling courses.

4. To stimulate more teaching of material handling (and the importance of material handling) in the nation's colleges and universities.

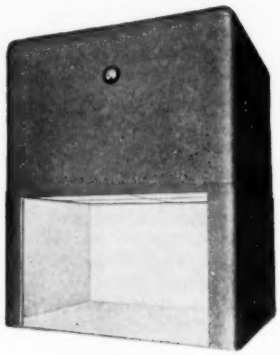
5. To determine from industry what skills and understanding it requires in the material handling engineers the colleges turn out.

Institutions, business groups, professionals, industrial firms and individuals interested in the committee's work are encouraged to correspond and cooperate.

It is expected that the program will provide a larger national force of technically trained manpower — to make the most of that one of every four production dollars spent for merely picking up, putting down, moving, storing, and transporting goods, without adding to their value.

Macbeth
Color Quality Control From Dyehouse to Finished Product

1... For Dyehouse Color Control



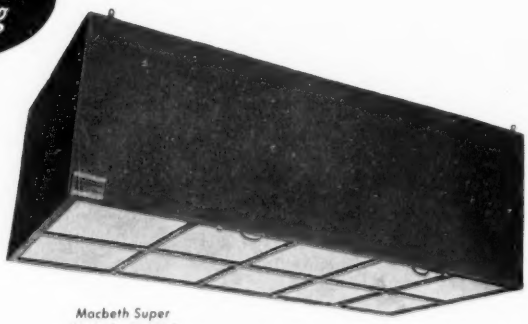
Macbeth Super Skylight BX848

Only Macbeth offers the textile mill complete and comprehensive color control from dyehouse to the finished product.

For dyehouse use the Macbeth Super Skylight BX848 diffuses the correct quality of accurate, reproducible North Sky Daylight over a limited area, allowing the dyer to maintain a close quality control over pre-dyeing and dyeing operations. BX848 also produces a second quality of light called Horizon Sunlight, for testing the validity of the match, under all qualities of illumination.

- **Materially improves product quality**
- **Available 24 hours a day**
- **Saves dyestuffs : Lowers rejects loss**

2.. For finished product matching and grading



Macbeth Super Skylight BX1014

Macbeth Super Skylight BX1014 provides North Sky Daylight over a wide area for the grading and inspection of finished materials on perching tables, racks, etc. This light also produces Horizon Sunlight. Mills employing Macbeth Daylighting and Color Quality Control report materially improved product quality, round-the-clock operation when needed.

For general examination and inspection work not requiring extreme color control accuracy, we recommend the Macbeth Examolite,® a low cost combination of incandescent and fluorescent light.

Please write for Bulletin No. 157

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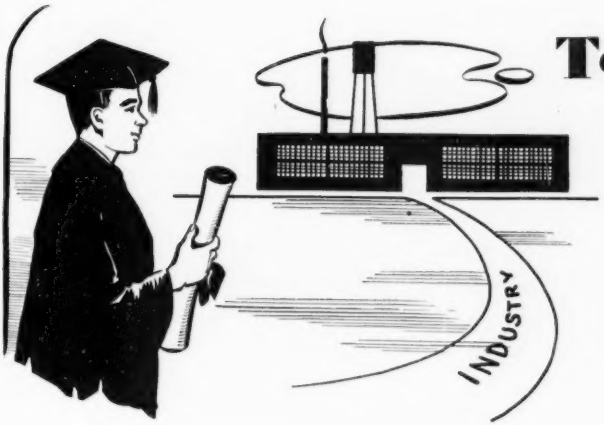
a subsidiary of MACBETH CORPORATION
Newburgh, N. Y.



Textile School Graduates Enter Industry

AGAIN THIS YEAR the textile schools of the United States and Canada have provided TEXTILE INDUSTRIES with the names and employers (where known) of their recent graduates.

This is splendid cooperation on the part of the schools.

If a firm name does not appear immediately after the graduate's name, he either had not decided about his employment at the time the information was compiled by the school or he contemplated going into one of the armed forces. In a few instances the branch of service was indicated by school officials and in turn is published here.

We extend our congratulations to these men and women who have chosen the textile and associated industries for their life's work. We wish them all much success and happiness.—The Editors.

Alabama Polytechnic Institute

Hugh W. Barrow, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Lavelle Beach, E. I. du Pont de Nemours & Co., Inc., Chattanooga, Tenn.
Emory O. Sherrer, E. I. du Pont de Nemours & Co., Inc., Charlotte, N. C.
Daniel D. Hall, Abbeville (S. C.) Mills Corp.
Robert M. Hall, Abbeville (S. C.) Mills Corp.
James A. Connally, Dan River Mills, Inc., Danville, Va.
Lamar Beach, Celanese Corp. of America, Rome, Ga.
William K. Singleton, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
Jack O. Middleton
John F. Wood

Bradford Durfee Technical Institute

Everett S. Arnold, Dan River Mills, Inc., Danville, Va.
Omer L. Bergeron, Berkshire Fine Spinning Associates, Providence, R. I.
Earl Bilsky, Fellowship at Inst. of Textile Technology, Charlottesville, Va.
Dana H. Binkoff, Dan River Mills, Inc., Danville, Va.
William B. Borges, Hesslein & Co., Inc., New York City
Edward P. Burke

Bradford Durfee continued

Everest Correa, Belding Corticelli, Putnam, Conn.
Louis F. Fayan, Jr.
Ernest Howarth, Factory Insurance Association, Hartford, Conn.
Edward F. Levell, Jr.
Robert W. Martin, Berkshire Fine Spinning Associates, Providence, R. I.
David Moitozo
Ernest Moniz
Chukwuemeka E. Okoye
Joseph D. Raposa, Fellowship at Institute of Textile Technology, Charlottesville, Va.
John D. Raposa, Factory Insurance Association, Hartford, Conn.
Henry Norman Reis, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Robert F. Rodman, III, Rodman Manufacturing Co., Lafayette, R. I.
Roger A. Sherman, Factory Insurance Association, Hartford, Conn.
Alan M. Sussman
Jacob Wachsberger
Herbert A. Weisman
Russell R. Wilkey
George M. Mackie
Shlomo Rosenbaum, graduate work at Brooklyn (N. Y.) Polytechnic Institute

(Continued)

Textile School Graduates

Bradford Durfee continued

Norman B. Weinstein
Sidney Wolin
Menelaos Yankopoulos, Duffen Dyeworks, Portsmouth, Va.

The Clemson Agricultural College School of Textiles

William Ausburn Amick
Charles Wesley Atkinson
James Lancaster Bridgeman, Burlington (N. C.) Mills
Ray Lester Broadwell
Roger Worth Baker
Gilbert William Ballentine
Harold Carlton Bloxham, Jr., Duplan Corporation, Hazelton, Penn.
Oliver David Brock
William Edward Burnett, Greenwood (S. C.) Mills
William Ellis Carpenter
William Theodore Cochran, Jr.
Gerald Ralph Carter
Alvin Hearin Clarke
Louie Antanakos Clayton
Sidney Lamar Cline, Riegel Textile Corporation, Ware Shoals, S. C.
William Pressley Cooper, B. S. Roy & Sons, Charlotte, N. C.
Robert Henry Cudd
James Ray Dawkins, Jr., Duplan Corporation, Hazelton, Penn.
Frank David Dabney, Dan River Mills, Inc., Danville, Va.
Graham Lawrence Davis
Eddie Calhoun Dixon
John Hardin Dowling
Clare Hill Draper, III
Olin Henry Dunn, Jr., Riegel Textile Corporation, Ware Shoals, S. C.
Robert Elliott Garrison
Walter Thomas Holliday
Luther Wightman Hampton, Jr.
James Floyd Hann
George Thomas Hauser
George Robert Hawkins
Paul Bearden Hazle
Dickson Lafayette Hendley
William Albert Hooton
Judson Odell Jones
Robert John Kay
Clyde William Kennedy, Deering Milliken, Greenville, S. C.
Eugene Howard Lehman, Excelsior Mills, Inc., Pendleton, S. C.
John Wesley Lambert
George Arthur Mobley
Paul N. Moore
James Irl McCulloch
Cannon Smith Nichols
James Manly Norris, Glenwood Mills, Easley, S. C.
Prince Farley Norton, Bath (S. C.) Mills, Inc.
Paul Rudolph Osborne, Borden Mills, Kingsport, Tenn.
Pascal Mark Pitts
James Allen Parkins

Clemson continued

Caleb George Pendley, Utica & Mohawk Division, J. P. Stevens & Co., Clemson, S. C.
John Gibson Rothell, Burlington Mills Corp., Burlington, N. C.
Charles Lee Rogers
John Joseph Snee
Kohn Thompson Sanders
Joseph Robert Shirley, Jr., Burlington Mills Corp., Burlington, N. C.
Luther Junior Sigmon, Burlington Mills Corp., Fayetteville, N. C.
Richard Russell Simpson
James Oliver Smith
Bonny Ray Stockman
George Edwin Taylor
Malcolm Gordon Thruston, Jr.
Norman Remington Tice
William Calvin Wylie, Rock Hill (S. C.) Printing & Finishing Co.
William Henry Walker, Laurens (S.C.) Mills
Norman Carodine Whitfield, Appleton Co., Anderson, S. C.
Cletis Douglas Williams
Elmer Lowrie Wilson
Horace William Wilson

Georgia Institute of Technology

Hiram C. Allen, III, Military
Robert L. Barnes, American Viscose Corp., Marcus Hook, Pa.
Fernando R. Beiro, Return to Cuba
Sherman W. Blandin, Jr., Military
Darnell Bohannon, Military
Benjamin H. Brinkley, Jr., Avondale Mills, Sylacauga, Ala.
Kenneth D. Brown, Peerless Woolen Mills, Rossville, Ga.
Theodore D. Buyer
Yuan Chun Chang, Graduate School
Angel Chaufan, Return to Argentina
Frank J. Clarke, Military
Louis H. Collins, Springs Cotton Mills, Lancaster, S. C.
Eldridge B. Cook, Jr., Military
James H. Cox, Goodyear Clearwater Mills, Atco, Ga.
Enrique C. Cubas
Samuel D. Dadisman, The Jefferson (Ga.) Mills, Inc.
Gerald W. Davis, Military
Lindsay P. Dixon, Burlington Mills Corp,, Greensboro, N. C.
Leonard Edelman, Military
Charles R. Faircloth, Dow Chemical Co., Midland, Mich.
John Key Griffin, Jr., Military
Beverly I. Grimes, Textron Southern, Hartwell, Ga.
Terrell Wingfield Hill, Military
Benjamin G. Holloway, Graduate School
William Edward Holt
John Wesley King, Milledgeville (Ga.) Mills
Louis Leo Kornfeld, Military
Linton G. Lanier, Jr.
Jack Lawler, Military
William D. Mabry, Military
Donald I. Makrauer, Military
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Albert M. Maslia, Military
Enrique Matalon, Return to Argentina

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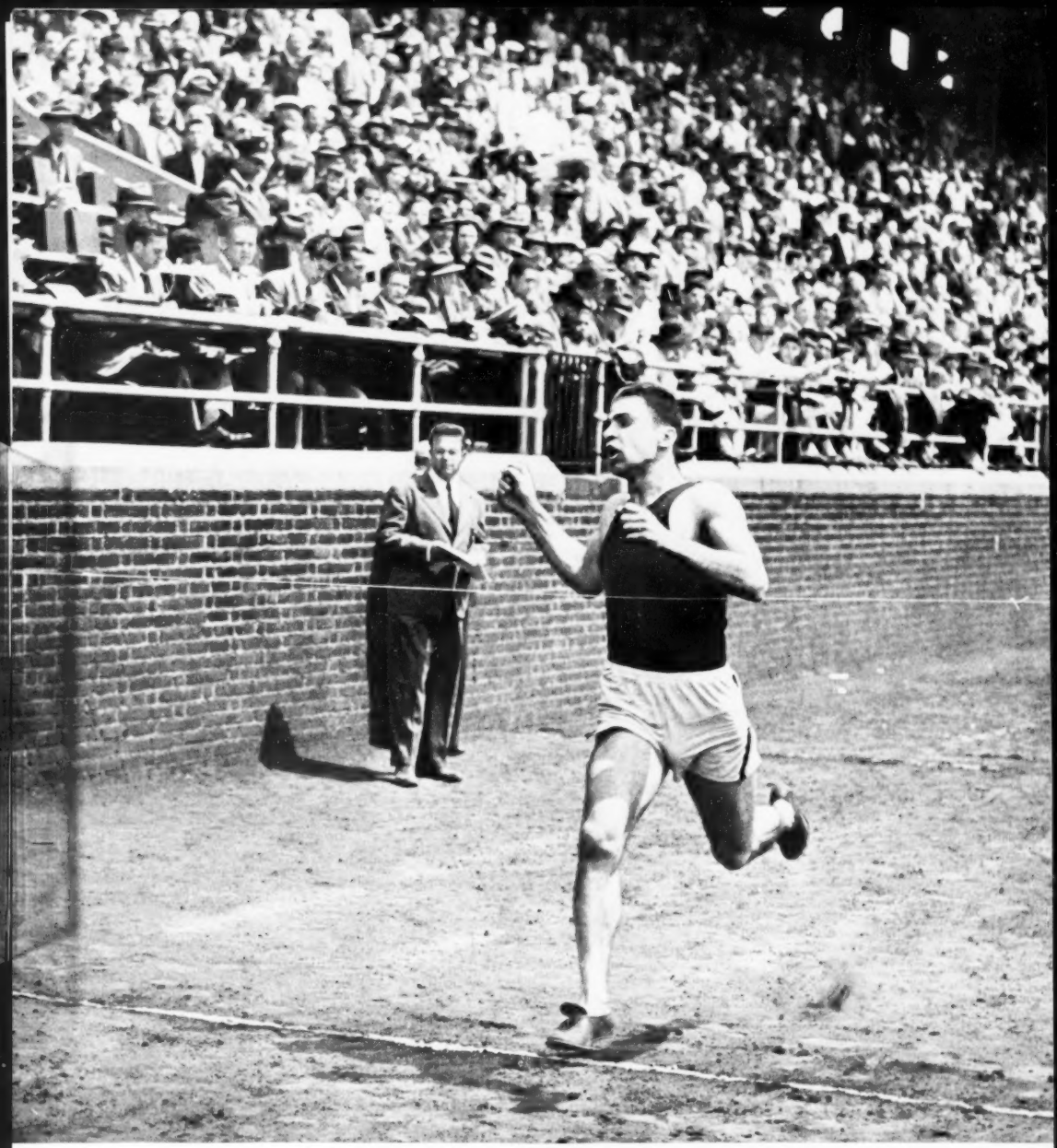

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Rev. Gilbert Dodds holds the American record for the one-mile run on an indoor track. His record set in 1948 is 4 minutes 5.8 seconds.

In everything we do, we make comparisons . . . In Full-Fashioned Knitting, the one standard for comparison is the 30-section "Reading" Machine with a production of 14 to 16 dozen pairs of superior quality stockings in 8 hours. Simple and flexible in operation. 51-gauge, 60-gauge.

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James Edward Murphy, Jr.
Alan David Nacht, Graduate School
Emmett D. Owens, Military
Ben A. Pelot, Jr., Riegel Textile Corp., Trion, Ga.
Paul E. Peniston, Military
Shiu Yim Poon, Dan River Mills, Inc., Danville, Va.
Benjamin L. Powers, North American Rayon Corp., Elizabethton, Tenn.
William S. Ramey, Johnston (S. C.) Mills
Donald H. Ramsbottom, Military
Ray R. Rast, American Enka Corp., Enka, N. C.
Charles R. Redding, Jr., E. I. du Pont de Nemours & Co., Inc., Martinsville, Va.
Claybourn B. Rhinehart, Military
John Thomas Rich, American Enka Corp., Morristown, Tenn.
Philip Sol Rothholz, Military
Jack Sadow, Military
Gerald A. Schabes, Textile Business, Mexico City
Gordon I. Scott, Firestone Plastics Corp., New York City
Clarence D. Smith, Military
Douglas W. Smith
William B. Smythe, Military
Robert Newton Suhr, Brighton Mills, Inc., Shannon, Ga.
Boyd T. Toben, Military
Richard S. Wasserstein, Military
Finis C. Whitfield, B. F. Goodrich Rubber Co., Akron, Ohio
James Strom Williams, Greenwood (S. C.) Mills
Jesse Lee Williams, Jr., Thomaston (Ga.) Mills
Sidney W. Williams, Jr., Military
Thomas H. Willings, Jr., Military
Otis C. Wise, Jr.
Bill Jay Wright, Jr., Mandeville Mills, Carrollton, Ga.

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Earl J. Goven, American Thread Co., Willimantic, Conn.
Douglas F. Grady, Robison Textiles, West New York, N. J.
Wesley F. Hixon, U. S. Marine Corps
Harold G. Mills
Thomas F. O'Leary, U. S. Navy
Irving W. Winn, Jr., Continental Mills, Lewiston, Maine
Curtis C. Allen, Barre Wool Combing Co., South Barre, Mass.
Marshall C. Bird
Joseph R. Deschamps
Thomas A. McEwen, Wyandotte Worsted Co., Rochester, N. H.
Denis M. McNulty, Wyandotte Worsted Co., Waterville, Maine
Charles S. Michaels, Albany (N. Y.) Felt Co.
Arthur L. Mullen, Jr., U. S. Marine Corps
Donald W. Aldrich, Ames Worsted Co., Lowell, Mass.
Albert Benjamin
Milton J. Bernstein, U. S. Navy
Kirk Bussiere, Richmond Lace Co., Trenton, N. J.
William H. Carroll, U. S. Marine Corps
Bertram Feinberg, H. Feinberg Co., New York, N. Y.
Ursula F. Keenan, Textron, Inc., New York, N. Y.
Michael Nestervich, American Silk Label Co., Unionville, N. Y.

Lowell continued

Daniel R. Robson, LaPorte-Bachman Woolen Co., LaPorte, Wis.
Wemyss R. Scott, Jr., E. I. du Pont de Nemours & Co., Inc., Martinsville, Va.
Gordon L. Axon
Gerald F. Barry, Graduate work, Lowell Textile Institute
Wilfred E. Belanger, Dan River Mills, Inc., Danville, Va.
Milton Boches, Graduate work, Lowell Textile Institute
Bruce O. Dickison, Arnold, Hoffman & Co., Inc., Providence, R. I.
Haig C. Donian, Graduate work, Clark University
Richard T. Eklund, Bigelow-Sanford Carpet Co., Thompsonville, Conn.
Lawrence W. Fisher, U. S. Navy
Edward H. Giard, Dan River Mills, Inc., Danville, Va.
Alan Ginsberg, Ginsberg Co., New York, N. Y.
Michael Hochfeld, Tanbro Fabrics, New York, N. Y.
Walter L. Hochner, Ciba Company, New York, N. Y.
Burton L. Komins, Graduate work, Clark University
Richard H. LaPlante, Crompton-Shenandoah Co., Waynesboro, Va.
Sherman Lein, Graduate work, New York University
Florence P. Liston, Graduate work, Lowell Textile Institute
Parker W. Longbottom, Geigy Company, Boston, Mass.
Donald J. McCartney
Charles D. Nelson, Barre Wool Combing Co., South Barre, Mass.
John T. O'Donnell, National Starch Co., New York, N.Y.
Robert A. Olney, Graduate work, Lowell Textile Institute
Margaret J. Peters, Dow Chemical Co., Midland, Mich.
Joseph A. Roux, United Elastic Corp., Lowell, Mass.
George A. Scagos
Donald J. Schaaf, Nopco Chemical Co., Harrison, N. J.
Edwin C. Sherburne, Graduate work, Lowell Textile Institute
Fred B. Shippee, Rohm & Haas, Philadelphia, Pa.
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Gilbert C. Bell, Merrimack Mfg. Co., Lowell, Mass.
Manfred G. Bloch, Graduate work, Massachusetts Institute of Technology

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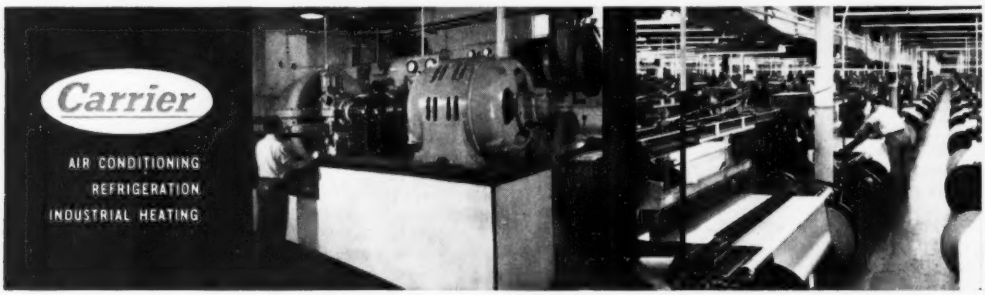
Your evaporative cooling system — good as it is — probably wasn't good *enough* to keep your mill temperature where you wanted it all this summer.

Didn't you find the hotter it gets outside, the harder it is to hold relative humidity *and mill temperature too?* And on really hot days didn't you have to either raise the humidity or let temperature go up?

It's a common problem, but the solution is simple. Just add Carrier Refrigeration to your present evaporative cooling system. *Then* you will have year-round control of both temperature and humidity. Day in, day out, temperatures will be *even* regardless of outside conditions. And the increase in your plant efficiency will soon pay for the cost of the refrigeration.

Now is the time to act. Get your installation in early and be sure you're ready by spring. Call or write us today, and we can show you how simple it is to add refrigeration, and how even temperatures will increase your profits. Carrier Corporation, Syracuse, New York . . . *for 50 years — the people who know air conditioning best.*



Step by step, this South Carolina mill added Carrier Refrigeration to their evaporative cooling system. Today, 2500 tons of refrigeration, supplied by Carrier Centrifugal Refrigeration Machine (pictured on the left), keep plant efficiencies high by holding temperatures and humidities constant year 'round.

Lowell continued

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Richard S. Brissette, Union Carbide & Carbon Co., New York, N. Y.
John E. Bromley, John Bromley & Sons, Philadelphia, Pa.
Perry H. Brown, U. S. Navy
Arthur W. Claridge, Cheney Bros., Manchester, Conn.
Harvey A. Dersh, Graduate work, New York University
Roland J. Desrochers, M. T. Stevens & Sons Co., Franklin, N. H.
Amedee J. Dupuis
Bernard H. Engelhardt, Engelhardt Co., New York, N. Y.
Panteleone S. Fulginiti, Factory Mutual Ins. Co., Boston, Mass.
Charles E. Gorecki, Industrial Rayon Co., Painesville, Ohio
Joel H. Grill, Graduate work, Columbia University
Herbert L. Haddad, U. S. Rubber Co., New York, N. Y.
Thomas W. Hocking, Bell Worsted Co., Worcester, Mass.
Nicholas Kalantzakos, Portsmouth Navy Yard, Portsmouth, N. H.
Francis A. Lewis, Factory Mutual Insurance Co., Boston, Mass.
Roger A. Lewis, Union Carbide & Carbon Co., Charleston, W. Virginia
William P. Lynch, Portsmouth Navy Yard, Portsmouth, N. H.
Henry J. McKone, U. S. Rubber Company, Willimantic, Conn.
Edward Mettler, Portsmouth Navy Yard, Portsmouth, N. H.
Richard H. Montgomery, Dan River Mills, Inc., Danville, Va.
Joseph C. Morris
Donald G. Pihl, Tennessee-Eastman Co., Louisville, Ky.
James R. Platt, F. C. Huyck & Son, Albany, N. Y.
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Robert J. Rutledge, Jr., Dan River Mills, Inc., Danville, Va.
Eric Singer, Fabric Research Laboratories, Inc., Boston, Mass.
Joseph M. Stanton, Jr., Western Felt Co., Chicago, Ill.
Eugene J. Wood, Jr., Pneumafil Co., Boston, Mass.
Francis E. Boutin, American Silk Label Co., Unionville, N. Y.
Robert I. Becker, Cheney Bros., Manchester, Conn.
Laurance G. Coffin, Columbian Rope Co., Auburn, N. Y.
Walter M. Koza, Portsmouth Navy Yard, Portsmouth, N. H.
Nicholas C. Liacopoulos, Portsmouth Navy Yard, Portsmouth, N. H.
Richard F. McKeon, B. F. Goodrich Co., Avon Lake, Ohio
Harold J. MacLean, Portsmouth Navy Yard, Portsmouth, N. H.
Warren E. Mann, Behr-Manning Co., Troy, N. Y.
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Arthur Kupferman, Graduate work, New York University
Richard N. Levenson
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Joseph J. Prudenti, United Elastic Corp., Easthampton, Mass.

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Avrum D. Smoler, Smoler Bros., New York, N. Y.
Ramon N. Tessler
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Ruth E. Denio, Cincinnati Chemical Co., Cincinnati, Ohio
Gerald M. Greenberg
Samuel A. Wood, Crompton-Shenandoah Co., Waynesboro, Va.
Marvin Aronowitz
Frederick B. Bishoff, U. S. Rubber Co., Naugatuck, Ohio
Paul M. Descoteaux, Industrial Rayon Co., Cleveland, Ohio
William R. O'Donnell, Industrial Rayon Co., Cleveland, Ohio
Nath Mal Vyas, Graduate work, Massachusetts Institute of Technology
James P. Wang
Alfred K. Hobbs, Lowell Textile Institute
Thomas C. H. Teng, Thermoid Co., Trenton, N. J.

New Bedford Textile Institute

Richard Ashworth, Arkwright Finishing Co., Fall River, Mass.
James Baird, Sandoz Chemical Co., New York, N. Y.
Jose Carvalho, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Everett Charves, Nyanza Color & Chemical Co., Ashland, Mass.
Leonard Cotter, Arkwright Finishing Co., Fall River, Mass.
Francis A. Hoffman, Davis Screen Print Co., Fall River, Mass.
George Kuliga, Seaplant Chemical Co., New Bedford, Mass.
John P. Lowney, Newport Finishing Co., Fall River, Mass.
Paul J. Lowney, Newport Finishing Co., Fall River, Mass.
Robert Maurer, Geigy Co., Inc., New York City
Bernard E. Normandin, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Robert E. Pearson, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Vincent J. Shanahan, Ciba Co., Inc., New York City
Donald R. Schaller, New Bedford (Mass.) Cordage Co.
Frank M. Buckley, Jr., F. M. Buckley Co., Hyde Park, Mass.
Donald F. Calnan, United States Testing Co., Inc., Hoboken, N. J.
James M. Faria, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Joseph E. Gill, E. I. du Pont de Nemours & Co., Inc., Seaford, Del.
Walter Klubowicz, Graduate School, North Carolina State College
Richard P. Lake, Berkshire Fine Spinning Associates Inc., Fall River, Mass.

(Continued)

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Here's a new high-production hot-air slasher, designed for natural or synthetic fibers, capable of greatly increasing production with little increase in space requirements.

With efficient new Air-Dri Slashers as replacements for out-of-date equipment, you can, in many cases, triple your slasher room output, eliminate overtime and greatly improve warp quality.

Yarn is 40% dry by the time it reaches the first guide roll because a wet splitting device divides the yarn into layers as it enters the dryer.

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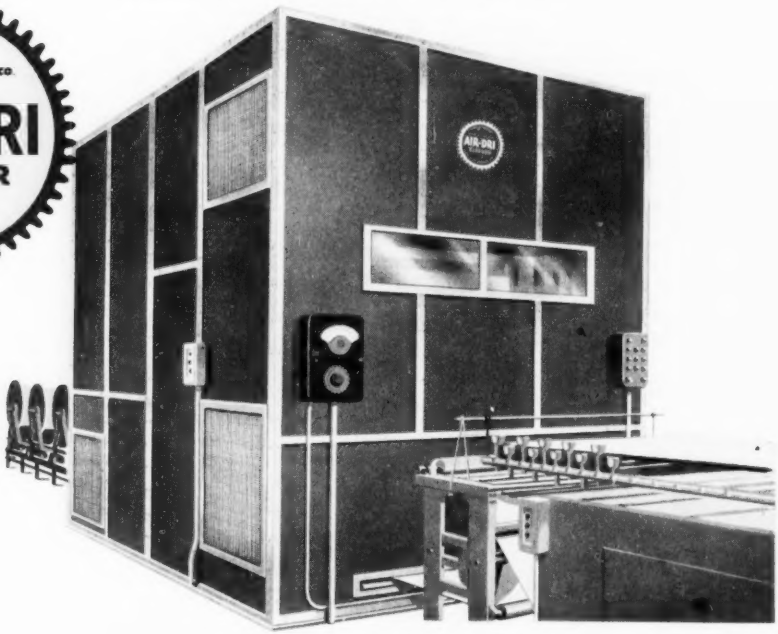

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John O. Anderson, Pequot Mills, Salem, Mass.
Aelred E. Lowney, United States Testing Co., Inc., Hoboken, N. J.
John Rocha, Springfield (Mass.) Research Depot
David Pearson, Naval Research Depot, Portsmouth, N. H.
Alfred Sarkes, Naval Research Depot, Portsmouth, N. H.
Joseph Sargent, Naval Research Depot, Portsmouth, N. H.
Raymond St. Pierre, Naval Research Depot, Portsmouth, N. H.
Norman Sunderland, Sylvania Electric, Boston, Mass.
Shirley Adams, Surgical Dressing Corp., New Bedford, Mass.
Florence A. Arvanites, Acushnet Process Co., New Bedford, Mass.
Anne D. Davids, Industrial Rayon Corp., Cleveland, Ohio
Alice I. King, Wamsutta Mills, New Bedford, Mass.
Clara E. Weigel, Acushnet Process Co., New Bedford, Mass.

North Carolina State College School of Textiles

E. M. Adkins, Abney Mills, Greenwood, S. C.
Ahmad Nazir, Will return to Pakistan
P. N. Amersey, Graduate work, University of North Carolina
R. L. Ammons, Tennessee Eastman Corp., Kingsport, Tenn.
H. T. Anderson, Army
R. W. Anderson, Burlington Mills Corp., Burlington, N. C.
M. D. Atwell, Marion (N. C.) Mfg. Co.
W. D. Bandes, Nescopeck (Pa.) Knitting Co.
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J. R. Belche, Nopco Chemical Co., Harrison, N. J.
D. M. Bernhardt, McCormick (S. C.) Spinning Mill, Inc.
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W. M. Blackmon, J. P. Stevens & Co., Utica, S. C.
B. A. Bobbitt, Fieldcrest Mills, Spray, N. C.
L. P. Bratton, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
M. S. Brettler, Abbeville (S. C.) Mills, Inc.
H. R. Broome, Nova Chemical Co., New York City
K. G. Camelford, Dominion Fabrics Ltd., Dunnville, Canada
A. J. E. Carrier, Dominion Textiles, Montreal, Canada
J. M. Carter, Burlington Mills Corp., Cramerton, N. C.
R. W. Cashion, American Cyanamid Co., Bound Brook, N. J.
J. N. Cheek, Robbins Mills, Aberdeen, N. C.
W. M. Clark, Locke Cotton Mills, Concord, N. C.
Betty A. Cline, J. P. Stevens & Co., Greenville, S. C.
Stanley Cohen, A. Steinam Co., New York City.
G. S. Congor, Dominion Textiles, Montreal, Canada
C. H. Cothran, Jr., Wm. Klopman & Sons, Asheboro, N. C.
J. C. Cowan, 3rd, Burlington Mills Corp., Greensboro, N. C.
R. C. Crawford, Celanese Corp. of America, Rome, Ga.
R. M. Crosby, II, Army
B. W. Cross, Hampton Wrenn, Inc., Martinsville, Va.

North Carolina State continued

G. W. Curtis, Jr., Mock Judson, Voehringer, Greensboro, N. C.
G. J. D'Annolfo, Bigelow-Sanford Carpet Co., New York City
J. A. Dayvault, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
J. F. Dermid, Gaffney (S. C.) Mfg. Co.
J. H. Duffy, Iselin-Jefferson, Inc., New York City
M. A. Eig, J. P. Stevens & Co., New York City
S. M. Ellington, Jr., Gaffney (S. C.) Mfg. Co.
H. C. Fleming, Jr., Rocky Mount (N. C.) Mills
R. D. Flynn, Dillard Paper Co., Greensboro, N. C.
P. R. Foght, Jr., Graduate work, Boston University
F. H. Foster, Duplan Corp., Hazelton, Pa.
H. C. Fowler, J. P. Stevens & Co., Greenville, S. C.
W. S. Futch, Army
E. E. Gantt, Dan River Mills, Inc., Danville, Va.
H. J. Garrou, Jr., Navy
W. A. Geiler, Waldrich Co., Clifton, N. J.
R. W. Gillon, Cannon Mills Co., Kannapolis, N. C.
L. R. Hackler, Tennessee Chair Co., Elizabethton, Tenn.
J. C. Harralson, Army
J. N. Heim, M. Lowenstein & Sons, New York, N. Y.
W. C. Herrmann, Coopers, Inc., Kenosha, Wis.
W. D. Hicks, Army
W. R. Higgins, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
W. D. Holt, Army
P. C. Huffman, J. P. Stevens & Co., Inc., Shelby, N. C.
W. G. Humphrey, Deering Milliken, Greenville, S. C.
D. B. Imrie, Dominion Textiles, Ltd., Montreal, Canada
W. E. James, Jr., Deering Milliken, Greenville, S. C.
N. J. Jolly, Stonecutter Mills, Spindale, N. C.
W. J. Keeter, Jr., Burlington Mills Corp., Kings Mountain, N. C.
C. P. Keever, Springs Cotton Mills, Ft. Mill, S. C.
J. R. Kellam, J. P. Stevens & Co., Inc., Shelby, N. C.
K. M. Kragas, Graduate work, N. C. State College
F. E. Larrison, Burlington Mills Corp., Wake Plant, Wake Forest, N. C.
P. Lavitt, Army
W. F. Lewald, Army
W. N. Lilly, Frank Ix & Sons, Cornelius, N. C.
D. A. Lowe, Jr., Burlington Mills Corp., Mooresville, N. C.
B. P. Luckadoo, Spindale (N. C.) Mills
J. B. McAuley, Pacolet (S. C.) Mfg. Co.
H. N. Lumley, Burlington Mills Corp., Greensboro, N. C.
C. W. McKenzie, Army
D. H. Maharam, Maharam Fabrics Corp., New York
R. D. Maharam, Maharam Fabrics Corp., New York
W. Margolis, Milbin Printing Co., New York
W. R. Martin, Jr., American Cyanamid Co., Stamford, Conn.
N. de Martin, Will return to Cuba
R. M. Maxwell, Jr., American Viscose Corp., Marcus Hook, Pa.
E. G. Mercer, J. P. Stevens & Co., Inc., Cheraw, S. C.
R. F. Miller, Hickory (N. C.) Dyeing & Winding Co.,
R. L. Morris, Morris & Denmark, Co., N. Y.
R. W. Munroe, Curlator Corp., Rochester, N. Y.
J. E. Murrow, Jr., Army
J. W. Muse, Jr., J. P. Stevens & Co., Inc., Greenville, S. C.

(Continued)

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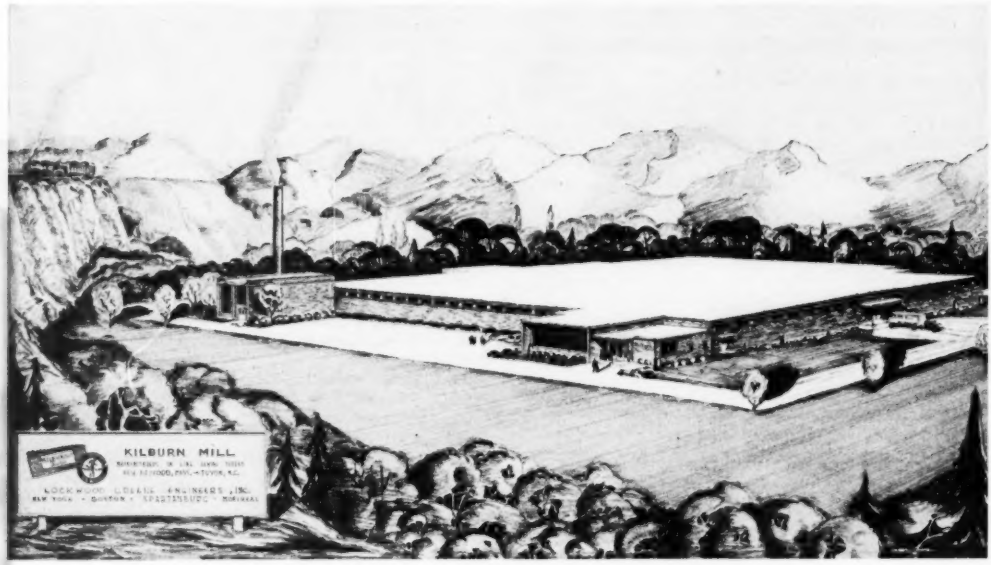

Kilburn Mill, Tryon, N. C., Manufacturers of Fine Sewing Thread

A RECORD OF SERVICE IN COTTON SPINNING AND WEAVING as measured by:

New Plants	149
Major Additions	387
Minor Additions, Reports, Appraisals	1,921
Total Engagements	2,457
Cost of New Plants and Major Additions	$210,000,000

Services rendered by Lockwood Greene: Plant location studies—Site investigations—Plant layouts—Design of buildings and services—Design of power and boiler plants—Supervision of construction—Economic studies and reports—Appraisals.

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T. A. Owens, Burlington Mills Corp., Franklinton, N. C.
C. H. Pan, Beaunit Mills, Rockingham, N. C.
B. F. Patterson, Cone Mills Corp., Greensboro, N. C.
V. G. Paul, Tennessee Eastman Corp., Kingsport, Tenn.
A. L. Payne, Chatham Mfg. Co., Elkin, N. C.
B. D. Peacock, American Enka Corp., Enka, N. C.
Al Perper, Graduate work, N. C. State College
G. C. Pyatt, J. P. Stevens & Co., Inc., Stanley, N. C.
D. A. Qualls, Hugh Grey Hosiery Mills, Concord, N. C.
Caldwell Ragan, Jr., Army
A. B. Reid, L. P. Muller & Co., Philadelphia, Pa.
J. F. Richie, Deering Milliken, Pacolet, S. C.
J. D. Robbins, Jr., Burlington Mills Corp., Burlington, N. C.
W. M. Rogers, Dan River Mills, Inc., Danville, Va.
L. L. Sartin, B. F. Goodrich Chemical Co., Cleveland, Ohio
H. H. Scheviak, Army
E. F. Scott, American Cyanamid Co., Bound Brook, N. J.
G. M. Shaver, Deering Milliken, Greenville, S. C.
J. C. Shaw, Burlington Mills Corp., Fayetteville, N. C.
H. T. Shell, Cone Mills Corp., Greensboro, N. C.
J. L. Sherrill, Cone Mills Corp., Greensboro, N. C.
F. H. Shugart, Research Dept., School of Textiles, N. C. State College
W. C. Sibley, Jr., Reeves Bros., Greenville, S. C.
J. C. Silva Netto, Will return to Brazil
A. J. Simpson, Riegel Textile Corp., Ware Shoals, N. C.
W. T. Simpson, Mock Judson, Voehringer, Greensboro, N. C.
W. S. Soesbee, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
B. L. Sokol, World's Fair Hosiery Co., Mexico City, Mexico
R. A. Stewart, Waverly Mills, Laurinburg, N. C.
P. D. Sweat, Cannon Mills Co., Kannapolis, N. C.
J. W. Swiggert, Wm. Klopman & Sons, Asheboro, N. C.
T. W. Teague, Curtis Equipment Co., Raleigh, N. C.
O. Teszler, Graduate work, N. C. State
L. E. Thomas, E. I. du Pont de Nemours & Co., Inc., Camden, S. C.
H. G. Townsend, Riegel Textile Corp., Ware Shoals, S. C.
A. J. Troeleman, American Enka Corp., Enka, N. C.
L. D. Walker, Bassett-Walker Knitting Co., Martinsville, Va.
J. M. Ward, Jr., Cone Mills Corp., Greensboro, N. C.
G. S. Watts, J. P. Stevens & Co., Inc., Shelby, N. C.
E. D. Webb, Dan River Mills, Inc., Danville, Va.
H. P. Westmoreland, Patterson Mills, Roanoke Rapids, N. C.
C. H. Whitehead, Cannon Mills Co., Kannapolis, N. C.
R. E. Wiggins, Army
T. A. Wilson, Jr., Cone Mills Corp., Greensboro, N. C.
K. C. Woo, Graduate work, N. C. State

The Provincial Institute of Textiles

Edgar M. Bartlet, Canadian Cottons Limited, Hamilton, Ont.
Thomas A. Brereton, Department of National Defense, Ottawa, Ont.
Karol L. Geyer, Eaton Knitting Co., Limited, Hamilton, Ont.

Provincial Institute continued

Maurice B. Graham, Montreal Cottons Ltd., Valleyfield, Que.
Paul H. Hughson, Montreal Cottons Ltd., Valleyfield, Que.
Herbert S. LePofsky, Dorothea Knitting Mills, Leaside, Ont.
Donald L. Robbins, Mercury Mills Limited, Hamilton, Ont.
Joseph Casper Wiechorek, Dominion Woolens & Worsteds Ltd., Peterborough, Ont.

Philadelphia Textile Institute

(Information requested but not furnished)

Rhode Island School of Design

Norman Binyon, Associated Factory Mutual Fire Insurance Co., Boston, Mass.
Robert Dodd, Lorraine Manufacturing Co., Pawtucket, R. I.
Edward McEvoy Driscoll, Institute of Textile Technology graduate school
George Z. Dunn, Jr., Institute of Textile Technology graduate school
Felix S. Eichelbaum
Peter Farago, Collins & Aikman Corp., Bristol, R. I.
Elliott L. Remington, Albany (N. Y.) Felt Co.
David Riley, Associated Factory Mutual Fire Insurance Co., Boston, Mass.
Arthur L. Robidoux, Berkshire Fine Spinning Associates Inc., Albion, R. I.
Robert T. Roche, Angus Park Woolen Co., Inc., Hanover, Conn.
Frank E. Splaine, Associated Factory Mutual Fire Insurance Co., Boston, Mass.
Marcus Thompson, Jr., Stillwater Worsted Mills, Inc., Harrisville, R. I.
Richard K. Arida, Eureka Printing Co., Clifton, N. J.
Ann Engels
Emanuel Goldstein, Navy Officers Candidate School
Robert A. Jones, Nopco Chemical Company, Inc., Harrison, N. J.
Edward L. Katz
Russell C. Lakey, Nopco Chemical Company, Inc., Harrison, N. J.
Edward C. Oliva, Institute of Textile Technology graduate school
Leo Peloquin
Louis Port, Clemson College graduate school
Harold B. Sturtevant, Jr., Joseph Bancroft & Sons Co., Wilmington, Del.
Milton H. Thoene, The Rayon Processing Co. of R. I., Pawtucket, R. I.

Saint-Hyacinthe School of Textiles

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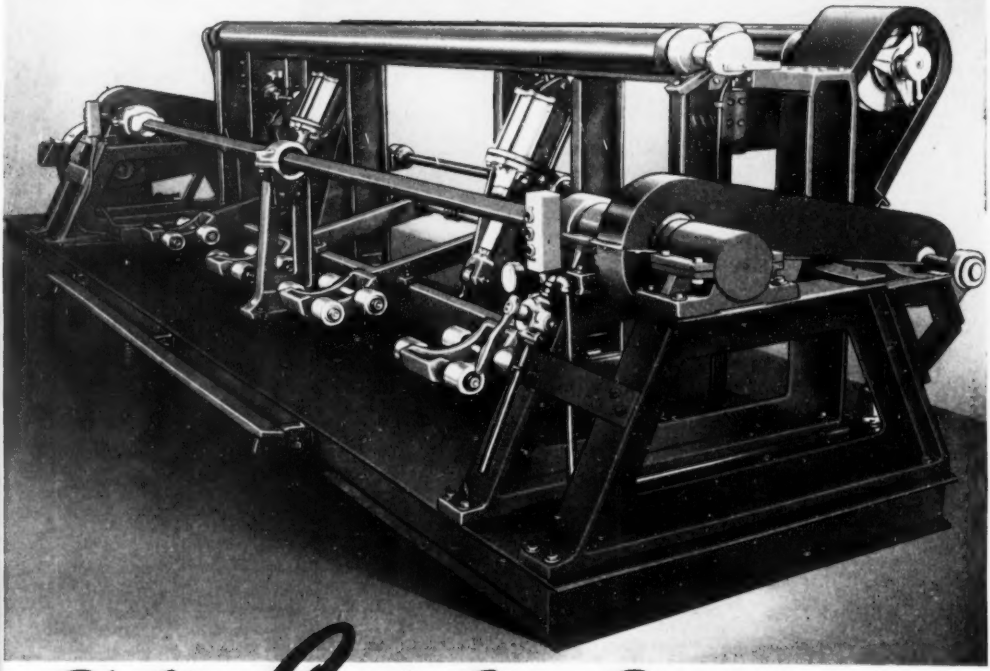
Jean-Rene Blanchard, Drummondville Cotton Company Limited, Drummondville, P. Q

(Continued)

New • High Speed • Larger Beams • Harder Beams



The New Cocker Heavy Duty Rebeamer for Unsized Warps

This Rebeamer is faster and will handle larger and harder beams than previous machines. It was especially designed for the carpet trade and is adaptable for heavy duck and other heavy beaming.

Shown is 144" Heavy Duty Beaming Machine, built to take one 144" Beam, two 72" Beams, one 108" Beam, two 54" Beams or four 36" Beams.

Machine is driven by DC Motor with converter provided. It operates at speeds up to 150 yards per minute with constant yarn travel and will take a Loom Beam with flange diameter up to 36".

Presser Rolls are controlled by large Air Cylinders to assist in forming firmest possible Beam. Machine is provided with Drag Rolls with special geared friction braking device. One Comb is furnished. Extra heavy frames and bearings assure long trouble-free operation at high speeds. All electrical controls furnished.

Write or wire for full information.

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WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

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Francois Houle
Georges Louette, Drummondville Cotton Company Limited, Drummondville, P. Q.
John Nettel, Drummondville Cotton Company Limited, Drummondville, P. Q.
Hubert Dubois, Paton Manufacturing Company, Sherbrooke, P. Q.
Marcel Turgeon, Drummondville Cotton Company Limited, Drummondville, P. Q.
Jean-Marie Bordeleau, Duplan of Canada Limited, Montmorency, P. Q.
Bernard Blanchette, Verney Corporation of Canada Limited, Granby, P. Q.
Bernard Dermine, Verney Corporation of Canada Limited, Granby, P. Q.
Bruno Fortin
Guy Kirouac, Warwick Woollen Mills Limited, Warwick, P. Q.
Eleuthere Boucher, Paton Manufacturing Company, Sherbrooke, P. Q.

Textile School Graduates

Saint-Hyacinthe continued

Gerard Jacob, Pinatel Piece Dye Works, Joliette, P. Q.
Yvon St-Louis, Dominion Burlington Mills, Montreal, P. Q.
Rodrigue Smith, Associated Textiles of Canada Limited, Louiseville, P. Q.

Texas Technological College

Victor O. Lolas, Returned to Peru
Joe Mike Brees, Texas Textile Mills, Dallas, Texas
Fred L. Eddins, Bonham (Texas) Cotton Mills
James L. Porter
Chas. V. Lofton, Brenham (Texas) Cotton Mills
Homer G. Kennamer, Jr.
Roger Lee Pruitt, Burlington Mills Corp.
Dhun M. Jalnawala, Returning to India

Blends Order of Day for Men's Socks

Phoenix Hosiery Company expects that 100% synthetic constructions will be permanently superseded by an assortment of blends in the men's sock field.

The newer fibers are found to have certain common characteristics, but they differ in specific ways. One may have a unique feature considerably superior to another.

Using a 100% synthetic construction, this manufacturer finds that stocking performance is limited to whatever qualities are inherent for that particular fiber. By combining a number of different synthetics, the virtues of each fiber integrated in the blend become additive. The resulting yarn is consequently superior to a 100% type.

The industry is going through a transient phase, emphasizing 100% synthetics for the time being. Meanwhile, problems encountered in knitting, dyeing, and finishing of the blends are being licked. The problem is to adapt and knit these blended socks to constructions best utilizing the combined features of the fibers.

Extensive consumer promotions will begin this Fall. In a brochure mailed to retailers, Phoenix notes: "Synthetic fibers are perhaps the greatest boon to the men's sock business to come along in over a decade. Wool consumption is not expected to decrease, but the market will enlarge and the new fibers will capture it."

Dynel Fabric Development Lengthens Life of Work Clothing

A new line of strong, lightweight industrial clothing is made from a recently developed fabric known as "Chem-Weave," which is reported to employ special weaving and processing of dynel yarns.

"Chem-Weave" shows exceptional resistance to chemicals, it is claimed. In immersion tests with 59 commonly-used industrial chemicals, the dynel fabric is said to have proved highly resistant with minimal loss in tensile strength, even in high concentrations and at temperatures up to a boil. Neither color nor fabric strength was affected in one test where "Chem-Weave" was immersed in 70% sulfuric acid at 50 C for 20 hours.

One of the principal advantages cited for the clothing is that of increased wearing comfort due to the fabric's unusually high factor of air flow.

Garments are a mottled, gray shade, a tone which hides staining, resists discoloration, and keeps the garments looking serviceable longer. They will withstand repeated industrial launderings and dry smoothly unwrinkled, saving the expense of ironing. Available from Chem-Wear, Inc., 1 Boston Post Road, Darien, Conn.

Always Uniform

Starch, as well as golf balls, requires precision control in every manufacturing step to maintain unvarying high quality.

That's why over the years Victor Mill Starch has become known far and wide as "The Weaver's Friend."

Victor provides better penetration, stronger warps, smoother surface, less shedding, fewer slashing problems. Rely on it . . . and the Keever man who serves you.

TEXTILE SALES DIVISION
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GREENVILLE, SOUTH CAROLINA
Charles C. Switzer, Manager

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• Letters to Editor • Technical Discussion •
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Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Do You use Edge Wires in Weaving?

EDITOR TEXTILE INDUSTRIES:

The major points of our basic problem are outlined as follows:

The fabric is woven on X-2 looms, with edge wires in place of a regular selvage; the edge wires cause our trouble.

(1) Loop edge wires break. Is there any satisfactory method of weaving this type of selvage without using edge wires?

(2) Shuttles wear out on the bottom, and "ridges" are worn on top.

(3) Reeds wear excessively. We remove the regular dents, and replace with steel dents where the edge wire goes through.

We should like to have the comments of other mill men who have woven this type of fabric successfully.

CONTRIBUTOR NO. 8476

(Two mill men gave their opinions on this problem before this issue went to press. Their replies are published here. Other comment is invited.—The Editors)

EDITOR TEXTILE INDUSTRIES:

We have had some experience in weaving cloth with edge wires. CONTRIBUTOR NO. 8476 may solve his problem by buying some nylon tennis strings (from a sporting goods store) for use in place of the selvage wires. If round edge dents are used in conjunction with the nylon edge wires, the trouble should be alleviated.

Tension on the selvage may be adjusted according to the size of the loop. Of course the size of the loop will be altered by the large nylon string.

CONTRIBUTOR NO. 8480

—◆—

EDITOR TEXTILE INDUSTRIES:

The only method we know of which various mills are using for weaving loop selvages is with a piano wire, but the way in which the wire is used varies. We feel that the best results can be obtained by fastening the piano wire to a swivel which is in turn held to the whip roll shaft by a spring.

We have a special temple top for weaving loop selvages, and it is necessary to make some slight changes in the reed, which we assume CONTRIBUTOR NO. 8476 may already have done. It is an accepted complaint that there will be trouble with the piano wires breaking, but with the above mentioned attachments we feel that this breakage can be held down to a minimum.

We note that the fabric in question is a plain weave, and assuming that a loop selvage is wanted on each side of the cloth, you will of course have a piano wire running through each selvage. On plain weaves these two wires will be handled just the same as two additional ends in the selvage. That is, one wire will pass through the harness eye in the front harness, and the wire on the other side

KINK CONTEST!

15 minutes of your time may be worth $100

This contest ends November 15, 1952.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are received:

The contest rules are simple:

All contributions must be postmarked not later than midnight, November 15, 1952.

A photo or rough sketch will make your entry more valuable, but if you don't have either, send us your kink anyway.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

KNITTING AND WEAVING OPERATIONS ARE SMOOTHER WITH PROFINE-FINISHED YARNS!

Day after day, reports of exceptional yarn softening and lubricating results with Profine come to us from leading mills.

On cotton knitting yarns — often harsh — mill men say that Profine has proved unusually effective in preventing uneven and irregular stitches, in addition to imparting a beautiful hand to the yarn.

Profine, applied from the winder troughs to wool, worsted and merino yarns, has greatly improved their knitting properties. Fabrics made from these yarns have a noticeably superior hand. And static troubles have been minimized or eliminated.

Equally satisfying results with synthetic fiber yarns are reported — results which show up favorably in all subsequent operations.

PROFINE IS ECONOMICAL

Profine is *99% active*. Made in white *flake* form, you need less Profine than liquid or paste products containing 50-70% water. Further, processing time is reduced and production rate increased with Profine.

Profine

Profine offers important advantages to the processor of any fiber or fabric. We urge you to try Profine *soon*.

Procter & Gamble CINCINNATI, OHIO
TEXTILE FINISHES SALES DEPARTMENT

MAKERS OF OLATE, PROXOL AND ORVUS PRODUCTS FOR EFFICIENT TEXTILE PROCESSING

will pass through an eye in the back harness.

The best results can be obtained by picking the shuttle under the piano wire instead of over it. For example, if when the shuttle is in the left box, the front harness is up, and the piano wire in the left selvage should be run through the eye in the front harness. By using this method we feel that the shuttle wear will be reduced to a minimum.

CONTRIBUTOR No. 8485

System for Controlling Weights in Woolen Yarn Spinning

EDITOR TEXTILE INDUSTRIES:

Variations in spun woolen yarn may be reduced considerably by following a procedure in force in our card room. We have Davis & Furber cards equipped with four-bank tape condensers; also a Platt four-bank condenser and three ring doffer condensers.

Our method of weight variation control applies to any type of condensing in that we always use a top spool to check the weight of each set. The top spool is called No. 1 spool, and the other spools of each set are called No. 2, No. 3, and No. 4—to the bottom.

At the start of each shift we make a "stop weigh"—that is, all spools Nos. 1, 2, 3, and 4 are weighed with the card stopped, and any variation in any spool is adjusted to the correct weight to match the No. 1 spool. The weight and number of each spool are written on small slips of paper, and the slips are tucked into or between the roving wound onto the spools.

After the necessary adjustments have been made and we know that all four spools on each set are the same weight as No. 1 spool, all we weigh thereafter is the top spool of each set; therefore the slip of paper on No. 1 spool indicates the weight of each spool in that set.

In sorting incorrect spools, they are placed on a reserve rack. The spinner is informed of the reserve of incorrect spools, and he in turn leaves them there until he has enough spools of a certain weight (heavy or light) to fill a ring frame or mule. We have both ring frames and mules. When there is a sufficient supply of either heavy or light spools to fill a frame or mule, the spinner puts them in and adjusts the draft to compensate for the incorrect weight of the spools, thereby spinning even yarn at all times.

Should the operator find a spool with no slip of paper on it, he informs the spinner who checks the spool for weight. If the weight is found correct the spool is spun, but if it is incorrect, it is put into the reserve rack. The slips of paper are returned to the card department and used over again. The numbered slips of paper help in distinguishing which spool is incorrect and in need of adjustment without going through another "stop weigh."

CONTRIBUTOR No. 8443

Roving Frame Production Off? Check These Points

If production in the card room has gradually dropped off, don't blame it on the operators until you have checked these points:

(1) Have you got the correct size motor pulley on all of your motors? Worn and undersize pulleys can cause variation in front roller speeds which will hurt production.

(2) Have you got the correct size twist gear for the hank roving on the frame? One or two teeth less in the twist gear can play hob with production as well as cause roving to run bad in spinning room.

(3) Are all belts properly adjusted in the belt guide so that they are running completely on tight pulley when frame is on. If not power is being wasted and production is being lost.

(4) Are steel rollers, stands, etc., in line and level, are gears clean and kept packed with lubricant? Are gears kept reasonably clean of lint and dirt? These can cause excessive power consumption and slower speeds which will result in lessened production.

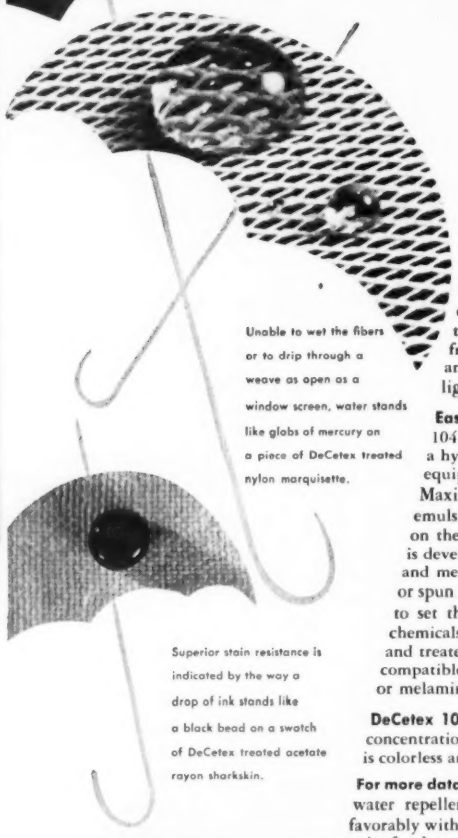
(5) Are jobs laid out correctly? Are your frame operators losing production at doff time? Possibly help in doffing frames would cause higher production and lower cost.

(6) Is too much time being lost for repairs? Possibly a thorough overhauling of frames would stop this.

(7) Are you running an excessive number of broken back ends? If so a thorough check might mean more pounds per doff, for you.

(8) Is too much time being spent waiting for stock? Better planning may help overcome this. CONTRIBUTOR No. 8488

DeCetex 104 *the superdurable* SILICONE *water repellent for synthetic fabrics*



Unable to wet the fibers or to drip through a weave as open as a window screen, water stands like globs of mercury on a piece of DeCetex treated nylon marquisette.

Superior stain resistance is indicated by the way a drop of ink stands like a black bead on a swatch of DeCetex treated acetate rayon sharkskin.

Withstands repeated dry cleaning and laundering. DeCetex is the most durable water repellent finish for acetate, nylon, "Dacron," "Orlon" and blends containing a substantial percentage of such synthetic fibers. Such fabrics, properly treated with DeCetex 104, retain a spray rating of 100 after 10 dry cleanings; 80 to 100 after 3 two-hour launderings.

Resists water-borne stains; improves fabric quality. Fabrics treated with DeCetex 104 have a soft, full "hand" which may be further modified by the use of conventional urea-formaldehyde or other textile finishing resins. They also show good resistance to water-borne stains. And DeCetex treated fabrics are relatively free from "mark-off"; show somewhat better tear, shrink, crease, and shine resistance. There is no decrease in porosity or in the light fastness of dyes.

Easily applied or combined with crease-resistant resins. DeCetex 104 can be applied from either an oil-in-water emulsion, or from a hydrocarbon or chlorinated solvent solution with conventional equipment such as a quetch or a two or three bowl mangle. Maximum effectiveness is generally obtainable from a master emulsion diluted to give a 1 to 2% silicone solids pick-up, based on the air dry weight of the fabric. Optimum water repellency is developed by curing for 4 to 7 minutes at 300-320° F. on light and medium weight fabrics; 8 to 12 minutes on heavier weight or spun fabrics; or 15 to 30 seconds at temperatures normally used to set the fibers in relatively heat-stable fabrics. No corrosive chemicals are involved; no washing or neutralizing is required, and treated fabrics are odorless, even after aging. DeCetex 104 is compatible with crease-resistant resins of the urea-formaldehyde or melamine-formaldehyde type.

DeCetex 104 is a viscous, high polymeric silicone supplied at a concentration of 65% solids by weight in methylene chloride. It is colorless and contains no corrosive chemicals.

For more data on this silicone product that imparts a truly durable water repellency to synthetic fabrics at a cost that compares favorably with that of other high quality water repellent finishes, write for data sheet No. BL-20.

DOW CORNING SILICONES

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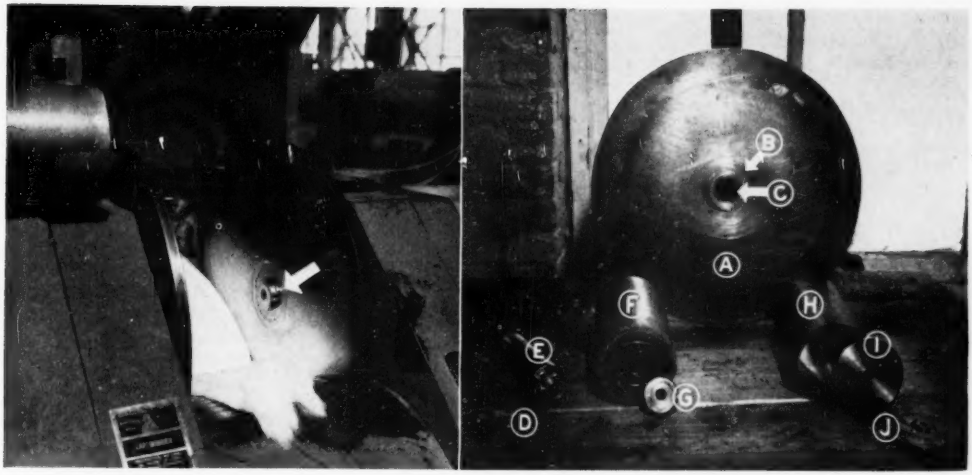


WORN AREA on flange (left) around pintle was caused by lap core slippage. Repair is economical. Parts affected (right) are: (A) flange; (B) repair disc in place and screwed to flange; (C) hole for pintle shaft; (D) pintle; (E) pintle shaft; (F) lap core equipped with metal ends; (G) pintle which fits into metal end of lap core same as (D); (H) new type open end lap core; (I) replacement pintle for open end lap core; (J) same as (I), showing opposite side.

Economical Repairs for Lap Winder Flanges

(This item was submitted in one of TI's "Kink" contests and is typical of the many short-cuts mill men use daily. Enter your favorite time-saver or method for improving quality in the current contest. For details see page 147.—The Editors)

EDITOR TEXTILE INDUSTRIES:

We have had considerable trouble with metal discs wearing out around the pintles on lap winders. Our lap winders are operated at high speed, and the metal ends of the lap cores score the discs when slippage occurs (see accompanying illustrations).

In effecting a satisfactory repair we made some 5½" discs to back up the pintles; however we could not weld the discs onto the core flange without warping the flange. Our shop routed out well about 5½" in diameter and about ¾ through the flange cross section at the pintle hole. Then we inserted the 5½" discs we made so that they were flush with the flange face. The repair disc is held in place by brads or screws, and the pintle fits in place as usual.

The repair is simple, effective, and we have saved about $18.00 each on lap winder repairs by having our shop do the work.

Our machine shop has also made some large pintles to accommodate the new type open end lap cores which are used on some of our lap winders.

CONTRIBUTOR No. 8481

Question:

Use of Picker Lap Weight Indicators

EDITOR TEXTILE INDUSTRIES:

We would like to have the opinion of readers about the advantages or disadvantages in connection with the use of a lap weight indicator in a picker room:

(1) What is the situation if constantly two types of cotton (American and Egyptian) are processed every day.

We found American cotton to be notoriously dry in comparison with Egyptian cotton which contains bale moistures up to 10 or more per cent. Can the same lap indicator readings be used for both types?

(2) Part of our laps are stored for one or more days, while others are put on the cards right after

doffing. What conditions would enter in this case, again thinking of the two cotton qualities?

(3) Older pickers show greater weight fluctuations (not due to humidity) than new modern openers and pickers. What advice in connection with lap weight indicator could be obtained in this case?

Any other advice will be appreciated.

CONTRIBUTOR No. 8486

Mill Uses Colored Rubber Bands to Identify Sliver in Cans

EDITOR TEXTILE INDUSTRIES:

Some time ago an article appeared in TEXTILE INDUSTRIES regarding the identification of sliver cans by painting the cans various colors. It may be of interest for you to know that we have a method which we consider better.

We are using 1½" rubber bands of various colors. They can be slipped on the cans and taken off at convenient times, and it is possible to manage with far less cans than if you paint them. Also, if a new mix or blend is processed, it may be kept separate by using rubber bands of a certain color. We hope the foregoing comments are of interest to your readers.

CONTRIBUTOR No. 8477
(*Denmark*)

Mule Spinning: A Way to Determine Length of Stretch

There always seems to be a difference between the calculated turns per inch and the actual turns per inch of mule spun yarn and yarn spun on the ring frame. Part of the discrepancy can be attributed to incorrect or inaccurate methods of determining the length of the stretch.

The length of stretch is the length of yarn spun on each draw or each cycle of operation. This is quite distinct from (although it is sometimes confused with) the travel of the carriage.

The only way to determine correctly the length of yarn spun per draw is as follows: Deduct from the yarn suspended between the spindle point and the nip of the rollers (when the carriage is at the end of its outward run), the yarn suspended when the carriage is in its closest position to the rollers. Then add the length delivered by the rollers, if there is any, during the inward run of the carriage. These figures may be ascertained either by actual measurement or by calculation.

Consider the accompanying diagramatic sketch in which AC represents the yarn suspended between the rollers and spindles when the carriage is against the back-stop, and AD when the carriage is "on the catch." The yarn delivered during the inward run is represented by EA.

The maximum yarn suspended would be:

$$\sqrt{2\tfrac{5}{8}^2 + (64 + 2\tfrac{3}{4})^2} = 66.83 \text{ inches}$$

The minimum yarn suspended would be:

$$\sqrt{2\tfrac{5}{8}^2 + 2\tfrac{3}{4}^2} = 3.80 \text{ inches}$$

The length of stretch would be:

$$(66.83 - 3.80) + 3.50 = 66.53 \text{ inches}$$

A good practical rule which is fairly accurate is as follows: The length of the stretch equals the travel of the carriage plus roller delivery during the inward run, minus one inch.

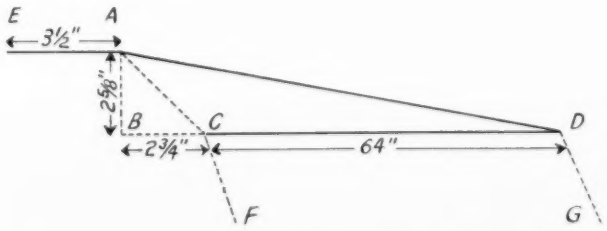
From this rule we get:

$$64 + 3\tfrac{1}{2} - 1 = 66\tfrac{1}{2} \text{ inches}$$

The length of yarn delivered during the inward run may be calculated from the travel of the carriage, revolutions of back shaft and the gearing between the back shaft and front roller. To prove and check this calculation, I have adopted the following procedure: When the carriage is stopped on the catch, a narrow slip of paper about ⅜" wide and 4 to 6" long is inserted between the nip of the front rollers. With one end of the paper just protruding between the rollers in the direction of rotation, a pencil mark is drawn across the width of the paper as near to the nip as possible, using the top roller as a guide when drawing a line on paper in the usual manner.

The mule is then allowed to complete the inward run and stopped again at the back stop. This action turns the paper through the rollers. Another pencil mark is drawn and the distance between the two marks gives the length of yarn delivered.

CONTRIBUTOR No. 8247
(*Canada*)



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AHCOQUINONE® BLUE AH
For Constant Shade Under ANY Light!

One of the AHCOQUINONE® family of wool colors, an acid milling color suitable for shading of chrome dyes. Clear constant shade under all lighting conditions, no redness under artificial light. Excellent fastness to light, milling, washing and wet processing treatments. Used on natural and synthetic fibres, particularly on wool, worsted and nylon.

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For vat, acid, direct dyes or auxiliary chemicals for all fibres and fabrics . . . see AHCO first!

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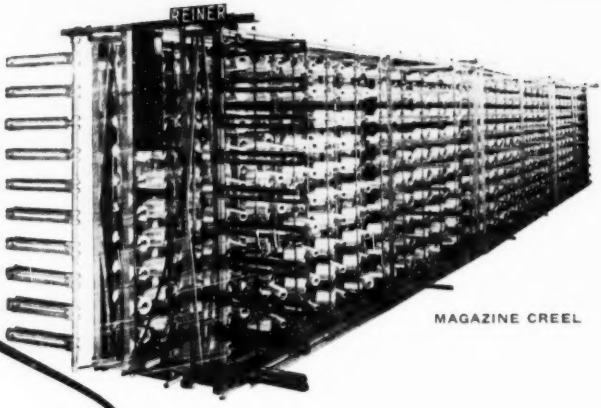
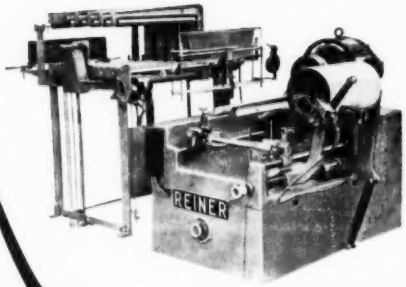


MAGAZINE CREEL

A PERFECT TEAM



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Model SW-24 with Yarn Storage Device

—designed to meet the need for speed, quality and economy—the very essentials for perfect production.

REINER CREELS*—Magazine, Single Type, Truck or Special Duty—are of the most modern construction, meeting all requirements, suitable for all yarn packages including nylon pirns. Available with mercury contact, electrical drop lever and loom type (drop heddle) stop motions, balloon control, variable pin disc tensions to serve all possible mill needs, from the finest to the coarsest yarns. Many other features are described in our creel catalog—yours for the asking.

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*Reiner Warpers and Creels can readily be used with any make warp knit equipment.

To Buy Reiner means to have a fully interrelated line of equipment from cone to fabric. It means ready advice and spare part service—in short, the best assurance of profitable and reliable production.

THE REINER LINE INCLUDES:

Tricot Machines (2- and 3-bar, 84" and 168")—Simplex (Double Knit) Machines—Raschel Machines—Full Width and Sectional Warpers—All type of Creels—66 Gauge, Four Section Full-Fashioned Hosiery Machines—Automatic Schiffli Embroidery Machines (10 and 15 yards)—Bobbin Winding Machines (for Stitching and Quilting). When you buy Reiner, you'll have no trouble getting replacement parts—all Reiner machines are American-made.

ROBERT REINER INCORPORATED

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

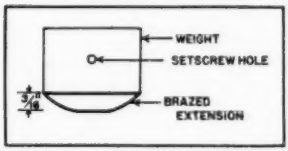
FOUNDED IN 1903 — 550-564 GREGORY AVENUE, WEEHAWKEN, NEW JERSEY

Device Reduces Wild Yarn at Winders

EDITOR TEXTILE INDUSTRIES:

Wild yarn, lint buttons, kinked yarn, and break backs can be reduced on individual cam traversing head winders by the use of a modified tension weight which permits the separation of the tension discs at the same time the sliding slub-catcher is cammed outward. The modification permits the cleaning of both the tension device and the slub-catcher at the same moment by the same air jet.

The regular ¾" x ¾" or ½" x ½" tension weight may be modified very easily as follows: A piece of 1/16" band iron 3/16" wide is cut to the length of the tension weight that is in use. The ends are ground off (see accompanying sketch) and brazed to the weight 45 degrees from the setscrew hole. This position will permit setting the weight in the proper position on the tension weight arm.



The weight is then placed on the tension arm and adjusted to such a position that the sliding slub-catcher arm will contact the brazed extension on the tension weight at the moment when the slub-catcher is opened for cleaning.

The weight will thus be taken off the right hand tension disc, and the jet of air which cleans the slub-catcher will blow between the tension discs and remove any accumulation which is not caught by the slubbed yarn remover.

A cam (similar to that which raises the sliding slub-catcher arm as the winder head approaches the battery) may be made and bolted to the winder frame. Position of the cam must be established so that the slub-catcher arm will be raised, in turn raising the weight on the right hand tension disc, just as the take-up roll starts to revolve the package.

The arrangement will permit the yarn to be easily pulled between the tension discs. The slub-catcher arm should then leave the cam so that tension will be applied to the yarn while the take-up roll is still acting on the package. The kink will thus be pulled out of the yarn.

The device will work with the tension which has a hole in the left hand disc, but care must be exercised to keep the left hand disc from falling out of position when the weight is removed from the right hand disc. With this type the tension cannot be opened more than 1/16". In experimenting with this type of disc the felt washer may be removed to increase the length of the flange on the left hand disc. When the solid type left hand disc is used the discs may be set to open ⅛" or more, and no trouble will be encountered with the left hand disc falling out of position.

CONTRIBUTOR No. 8429

Written Orders Speed Hosiery Production

EDITOR TEXTILE INDUSTRIES:

In many knitting mills verbal orders are sometimes given for certain styles which are to be given priority in production and processing. Many mistakes are made because someone forgot the verbal orders. Complete instructions may be written on a simple form printed on cardboard stock, a red slip attached, and the markers accompany the hosiery throughout the operations.

The cardboard form should include information such as:

From:.....
To:.....
RUSH ORDER
Lot No.....
Style:.....
Color:.....
Size:.....

When written instructions are attached to the hosiery, production is not interrupted with many needless and costly delays, and priority orders are finished on schedule. CONTRIBUTOR No. 8437

Makes Chemical Feeder for Spray Tanks

EDITOR TEXTILE INDUSTRIES:

The principal source of trouble in some air conditioning systems is the growth of algae in the water tank. Some of the tanks hold about 800 gallons of water for the spray. The algae manifest themselves in the form of grayish sludge which floats on top of the water and causes foam. Algae accumulate rapidly and may completely block the flow of water through the screens several times each day.

The undesirable condition may be easily corrected by adding the correct amount of the right kind of chemical daily. A drip feed appears to be the most satisfactory arrangement for applying the chemical treatment. A chemical feed arrangement may consist of a 55-gallon drum mounted on a neat wood platform above the water level in the tank, so that the mixture may be fed by gravity. A needle valve is satisfactory to control the rate of feed, which is about two quarts of liquid treatment daily.

S. H. BOYER

You'll see your costs shoot upward in more ways than one, if there are worn, vibrating spindles in your spinning room. They cause wasteful wear on bobbins, bolsters, and other frame parts . . . they result in bruised, tangled yarn. Quality and production both take a beating when your bobbins slip or wobble on a worn spindle.

To eliminate spindle vibration, and give you super-smooth, super-economical operation, Ideal Machine Shops restores perfect balance and diameter, to worn spindle tops, acorns, whorls, and bearing spots under the whorl . . . rebuilt *equivalent to new.*

SEEING DOUBLE?

(In Spindle Costs)

It's The Vibration!

In fact, Ideal Metallized Spindles run longer than new ones in many cases, due to the high-carbon, wear-resisting metal built into worn spots. By rebuilding the blade with special oil-retaining metal under the whorl, wear against bolsters is practically eliminated.

We'll See You at the SOUTHERN TEXTILE EXPOSITION
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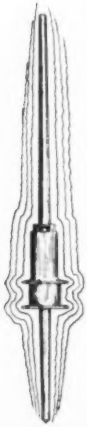
Ideal's complete rebuilding job enables you to economize on spindle costs . . . and get bonus savings of longer service, smoother production and surer quality. Write, wire, or call us.



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MACHINE SHOPS

Phones 4161 and 4391
BESSEMER CITY, NORTH CAROLINA

28TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

Roll Weight Measurer

(Continued from page 83)

in less than a minute; in another minute, upon adjustment of the thumb nut on top, the instrument scale shows (within 4 ounces) the actual weight delivered to any top roll.

Both spring-weighted and lever-weighted top rolls can be accurately checked with the weight measurer.

Dixon Lubricating Saddle Co., Bristol, R. I.

For additional data, request item H-104, using business reply card on page 196.

Finish for Acetate Satins Needs No Curing

Ribbonset Finish is a newly developed alkyd resin dispersion which, according to the manufacturer, completely eliminates the need for curing. It imparts a hard film to all fibers and retains luster without causing shade change.

Called Ribbonset Finish because one of its most important uses is its application to acetate satins where a parchment-like hand is desired without mark-off, it is also recommended as a firm finish for taffetas, ninons, bedspread, blanket binding, and underwear satins.

Scher Brothers, 519 Getty Ave., Clifton, N. J.

For additional data, request item H-110, using business reply card on page 196.

Cloth Guider Operates on 110-Volt A-C

An electrically operated cloth guider which operates from any 110-volt, 50 or 60-cycle a-c source has been announced.

The new guider, according to the maker, opens and closes the metal and rubber rolls in 1/50 second, insuring accurate guiding. Other features claimed for it are: pressure between the metal and rubber rolls can be instantly adjusted; also quick adjustment can be made of the distance that the rolls open.

The operating switches, made by the guider manufacturer, can be replaced in a few seconds, he states. These switches are equipped with newly developed arc suppressors which the makers claim give them almost unlimited life.

For processing very delicate fabric the a-c operated guiders can be furnished operated by electric eyes. In this case the fabric's selvage energizes the coils by interrupting a beam of light, making it unnecessary for the selvage to touch a lever. The guiders fit on existing stands.

Guider, Roll & Service Co., Daytona Beach, Fla.

For additional data, request item H-111, using business reply card on page 196.

NEW Equipment AND MATERIALS

Other items are described on pages 81 and 83

Lieberknecht Announces New 66-Gauge FF Machine

A new 32-section, 66-gauge full-fashioned knitting machine for women's nylon hosiery is reported to produce a finer-textured, tighter fabric at high production levels. According to the manufacturer, exhaustive testing in actual production work shows that it runs at speeds equal to or better than machines now on the market. Production levels will, therefore, remain about the same, varying only slightly because of the greater number of courses required.

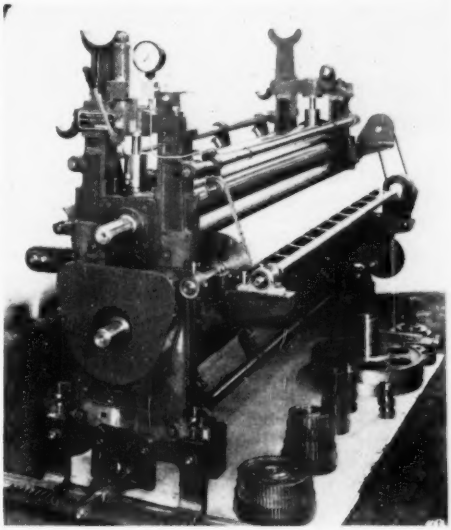
Limited production is expected to begin later this year, with the number of machines produced depending on availability of raw materials.

Karl Lieberknecht, Inc., Reading, Pa.

For additional data, request item H-112, using business reply card on page 196.

Peralta Doffing Device

Pictured here is a Peralta machine equipped with doffing device referred to in TEXTILE INDUSTRIES' digest of the Carder's Guild proceedings during the spring meeting of the National Association of Woolen and Worsted Overseers (page 119, July issue).

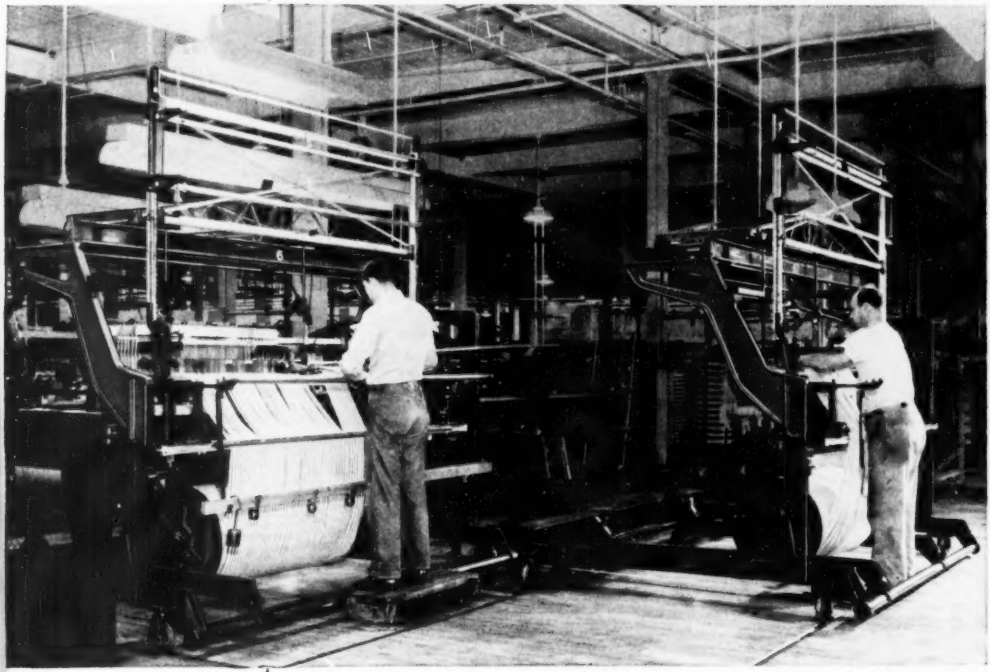


The development replaces the slatted apron and is said to eliminate the static problem. Stock condenses from crush rolls onto 8½" wire-covered doffer roll. Comb feeds web onto intermediate broad band apron, fast and full.

Duesberg-Bosson of America, Inc., P. O. Box 472, Fitchburg, Mass.

For additional data, request item H-114, using business reply card on page 196.

The use of **BARBER-COLMAN WARP DRAWING MACHINES** substantially reduces warp preparation costs for mills requiring constant changes of pattern...



The above illustration shows one of several Barber-Colman Warp Drawing Machines in operation at the Schoolfield Plant of the Dan River Mills, Danville, Virginia.

At Dan River, a large variety of striped cotton warps are drawn daily. The use of Barber-Colman Warp Drawing Machines substantially reduces warp preparation costs for mills requiring constant changes of pattern. A single machine operated by an experienced operator and helper provided with well-slashed warps will obtain production equivalent to seven or eight Drawing-In Hands.

DATA

Warps per eight hour shift: 8 — 11
35/1 Cotton 2884 ends per warp, 72 ends per inch, 36-1/2 dent
Reed Straight Draw, 6 Harness — 4 Banks of Drop Wires, 160 PPM

The Warp threads are drawn through Drop Wires, keyhole-type Heddles and the Reed in one operation from any predetermined draft. If you are not already equipped with keyhole-type Heddles, now would be the time to change as these are necessary equipment in order to operate a Barber-Colman Warp Drawing Machine.

AUTOMATIC SPOOLERS
SUPER-SPEED WARPERS
WARP TYING MACHINES
WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS • U. S. A.

Framingham, Mass., U. S. A. • Greenville, S. C., U. S. A. • Manchester, England • Munich, Germany

Three New Ciba Products

Dyeing Assistant No. 52 is recommended as a "carrier" or dyeing assistant in the application of the Cibacete Colors on "Dacron." It is marketed in a liquid form which can be diluted with water and added directly to the dyebath. It will leave Dacron with a soft, lofty hand, the manufacturer claims.

Neosol Printing Black BD is reported to offer distinct advantages to the printer. According to the manufacturer, it produces a comparatively low cost black with excellent fastness on all cellulosic fiber materials, distinguished by a bloomy deep shade and sharply defined details. Because of its resistance to hydrosulphite, the product is especially recommended for producing fine outlines, free from halos, alongside vat color and white discharges. Also, when used as a black on white or colored overfalls this dyestuff is very useful.

Neolan Green 8G, Neolan Green BF, and Neolan Flavine GFE have been developed to brighten the range of greens and yellows heretofore available, the manufacturer states. They dye level, are simple to apply, and are easy to shade.

Ciba Co. Inc., 627 Greenwich St., New York 14, N. Y.

For additional data, request item H-113, using business reply card on page 196; please specify product.

"Lint-tight" Manual Starter For Textile Applications

A newly designed loom motor starter features a "lint-tight" enclosure. Designed specifically for the textile industry, the heavy sheet steel enclosure is provided with a neoprene gasket which, the manufacturer claims, effectively excludes all lint and dust normally found in textile applications.

The flush handle reduces possibility of damage or accidental operation. It is easy to operate with a simple up and down motion. Handle position clearly shows whether starter is "on" or "off."

An over-center cam type cover latch provides heavy clamping pressure on the neoprene sealing gasket. Vibration or shock conditions will not affect the sturdy toggle mechanism, it is claimed. The cover is interlocked to prevent opening when starter is "on."

Protected type overload relays permit group fusing of several motors on a single branch circuit. Mechanical linkage is provided to permit forcing contacts open with direct pressure from handle. Mechanism is trip-free, making it impossible to hold the contacts closed while an overload condition exists.

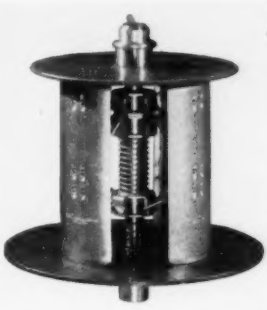
Square D Company, 4041 North Richards St., Milwaukee 12, Wis.

For additional data, request item H-117, using business reply card on page 196.

Rayon Cake Holder with Adjustable Tension

A recently developed self-centering rayon cake holder with adjustable tension is made of aluminum and steel, is rust proof and top and bottom plates are of unbreakable plastic, the manufacturers claims.

Described by the maker as the fastest rayon cake holder available, its operation is quite simple, only one hand being required to gain the necessary productive speed.



Rayon cake holder (Steel Heddle).

Steel Heddle Manufacturing Co., 2100 W. Allegheny Ave., Philadelphia 32, Pa.

For additional data, request item H-108, using business reply card on page 196.

Finer Glass Yarn for Industrial Fabrics

An additional series of finer glass yarns for industrial fabrics has been announced.

The new yarns, designated "225" industrial yarns, are used largely in industrial cloth, electrical insulation, plastic laminations for aircraft construction, tape, and similar applications, the manufacturer states. They will be manufactured to standard industry specifications, and packaged to suit the customer.

Yarns are made up of strands twisted and piled to suit the end use. The "225" series means that each strand runs 22,500 yards to the pound. A strand is composed of 204 seperate continuous filaments of fiber glass. Each filament of this size averages 28 hundred-thousandths of an inch in diameter.

Fiber Glass Div., Libby-Owens-Ford Co., Nicholas Building, Toledo 3, Ohio.

For additional data, request item H-106, using business reply card on page 196.

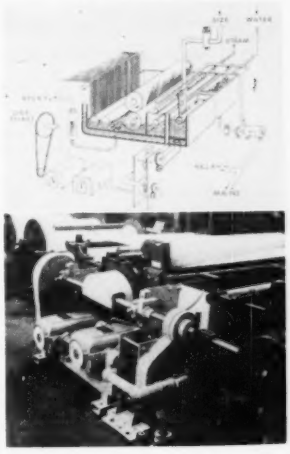
Shirley Automatic Size Regulator

The Shirley automatic size regulator, a device for controlling the amount of size put on warps at the slasher has been developed by the British Cotton Industry Research Association, and is now being made under license by Joseph Hibbert & Co., Ltd., of Darwen, Lancashire, England.

It is claimed that by means of this equipment a warp can be sized to any desired percentage simply by setting a pointer to that percentage on a graduated dial.

The regulator, it is stated, automatically, continuously, and simultaneously detects and compensates for variations in practically all the

Schematic diagram and mill installation photo of Shirley automatic size regulator (Hibbert).



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...New Warehouse Facilities for Atlantic Steel Company Warehouse Division

TO PROVIDE YOU with a wider variety of steel warehouse products and services, a new, modern warehouse is being constructed on a nine-acre tract near our new electric furnace and plant.

Modern railroad siding and truck docking facilities will further improve the rapid service for which our Warehouse Division has already gained a good reputation.

We expect to be in our new home by early fall.

Meanwhile, we are carrying on business from the same old stand with the same enthusiasm and policies that have guided us through five years of service.

If you have a problem involving steel supply or service, give us a shot at it.

Service In Step With Southern Progress

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

NEW Equipment AND MATERIALS

factors at the slasher which affect the percentage of size put on the warp. For example, it compensates for any variability in consistency between different deliveries of starch, or for the fall in the viscosity of the size due to prolonged boiling, or for variations in the amount of condensation of water which take place in the size box.

The regulator also compensates for variations in the take-up properties of the warp, according to reports. Thus the correct percentage of size is obtained on an entirely new type of warp just as easily as on a routine type. Too, it is said that allowance is made for any variations in the sizing conditions imposed by the machine itself, such as the pressure at the nip of the squeeze rolls, the hardness of the roll covering, and the speed of operation.

The regulator, first of all, requires that a stock size mix be prepared. This mix should be sufficiently concentrated so that, if it were used undiluted in the size box, it would put more than the required percentage of size on the warp.

Arrangements are then made to feed the box with this mix so that the ingredients enter the box at the rate at which they are required to be taken up by the running warp to put on the predetermined percentage of size. At the same time, water is automatically run into the box to dilute the size to the extent that the ingredients are taken up at the same rate at which they are fed to the box.

Since the rate at which the regulator responds to changing conditions has been found to be inversely proportional to the capacity of the box, the size box used with the regulator has a capacity of only about 8 gallons.

A metering pump delivers, per stroke, a volume of size which remains practically constant over the wide ranges of speed of pumping, size viscosity, and size temperature encountered in the sizing process. For regulating the water supply, a level controller maintains the required depth of size to within about one-fiftieth of an inch, even in the presence of a boiling and agitated size mixing.

The concentrated stock size and the water for diluting the size are

stored in tanks mounted in front of the size box. The size box is divided into a mixing trough (in which the size and water are mixed together) and a working section containing the immersion and squeeze rolls and the diaphragm of the level controller.

The stock size is drawn from the tank by the metering pump and delivered to the mixing trough through a narrow slot which is cut along the top of a 2-inch diameter distributor pipe mounted horizontally inside the mixing trough and spanning the full width of the machine. The metering pump is driven from the sideshaft of the machine through two continuously-adjustable gears.

The speed-ratio control knob on one of the gears has a pointer moving over a scale graduated in percentage of size. This pointer is set to the percentage of size required. The speed-ratio control knob on the other gear is set to the appropriate graduation in a scale showing the weight of warp per 100 yards.

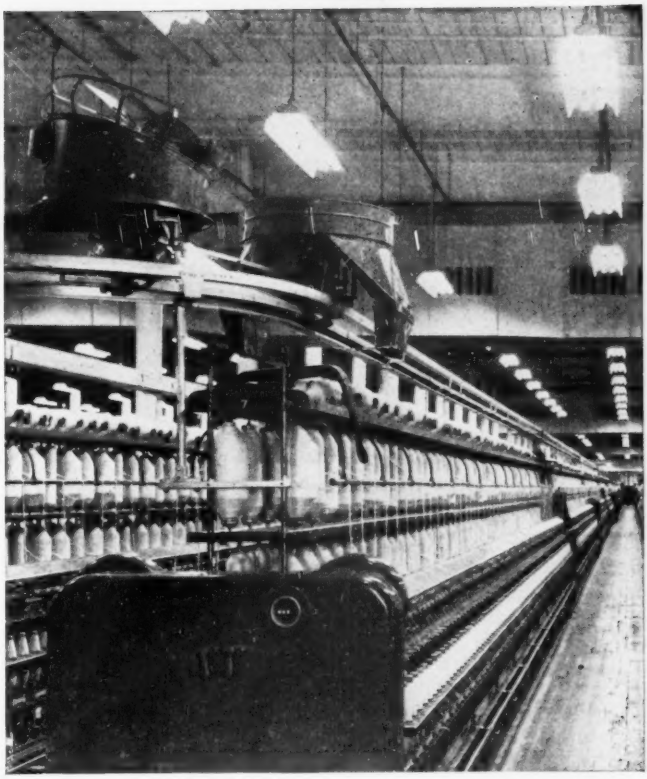
The water is drawn from the storage tank by means of an electrically driven centrifugal pump which is brought into operation as dictated by the level controller operating through a relay. The water is sprayed into the mixing trough across the full width of the machine. The spray is heated to within a few degrees of boiling by allowing it to fall over a horizontal steam heated pipe before it encounters the stream of stock size issuing from the slot in the distributor pipe.

The incoming stock size, the water, and the size already in the mixing trough are thoroughly boiled up and mixed together by open steam from a pipe fixed to the bottom of the trough. The mixing flows from the trough as required into the working portion of the box through a narrow horizontal slot cut in the bottom of the partition separating the trough from the working section. The size in this section is kept boiling by means of open steam pipes.

A prototype model of the regulator is reported to have been tried out on a mill slasher and to have given practically no trouble during nine months of routine use. The warps sized on this machine are said to have woven better than the warps sized on an adjacent machine not equipped with the regulator.

In using the equipment industrially, a single concentrated stock size would normally be prepared to cover the whole range of sizing on all the machines at any one mill.

Use of the regulator is not limited



Continuous Cleaning

Ringrail to Rafters

They surely must be doing a job, these Parks-Cramer Traveling Cleaners, for they are now standard equipment for more than 17,000,000 spinning, twisting, winding, spooling, and warping spindles.

And now its own twin, the Up-draft Cleaner, prevents lint accumulations topside. With Frame Cleaners, it runs tandem. In cardrooms or in other preparatory areas, it runs solo. And will it keep lights, conduits, ducts, and such, clean? You wouldn't know the place!

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

CONTROL YOUR COSTS with PRINTWEIGH

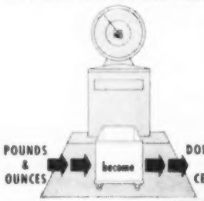
Printed weights keep records RIGHT in textile weighing!

STOP human errors in reading, remembering, recording

Toledo Printweigh Scales can help you *eliminate waste* and *improve accuracy of your control records* in receiving, stock rooms, batching, shipping and other operations in all plants today!

Printweigh stops errors . . . provides *printed* weight records . . . assures you that the accurate indication of the Toledo dial will reach your accounting records without chance of human error. Prints *directly* in big, clear figures . . . on thick tickets . . . on large or small sheets . . . on strips . . . with extra copies. Saves time, stops losses, assures *accurate* weights *accurately* recorded! Send for bulletin 2021 on modern weight control. Toledo Scale Company, Toledo 1, Ohio.

On your scale MATERIAL becomes MONEY



TOLEDO®

HEADQUARTERS FOR SCALES

NEW Equipment AND MATERIALS

to sizing — continuous impregnation and coating of materials are other fields to which the principle of the regulator could be applied.

Joseph Hibbert & Co., Ltd., Darwen, Lancashire, England.

For additional data request item H-501, using business reply card on page 196.

New Finishing Process Makes Rayons Unconditionally Washable

A new finishing process is reported to render 100% spun viscose rayon fabrics unconditionally washable. Readily prepared and applied with conventional finishing equipment, the finish is a permanent one which will last the life of the fabric, the manufacturer claims. The process employs the finishing resin Aquex BNWC.

Fabrics treated with the new process are said to have the advantage of low residual shrinkage when washed at the boil and no progressive shrinkage even when washed many times at the boil; also fabrics are resistant to the damaging effects of chlorine, acid, and alkali washes. They can be bleached in the home or in commercial laundries without any danger of yellowing or any loss of tensile strength, it is claimed. Another advantage cited is an improvement in the wet strength of the fabric.

Practically all types of hand can be obtained with this process, the announcement stated — from that of a soft shirting to the hand of a full dress fabric.

Aquex Development and Sales Corp., Dept. C, Whippany, N. J.

For additional data, request item H-118, using business reply card on page 196.

Worsted Oil with Anti-Static Properties

Twitchell 7421 Worsted Oil provides the static control required by high-speed processing in most instances, the manufacturer reports. This is true, he says, for integrated worsted operations where the oil is applied throughout, or where tops are processed with at least 1½% oil.

Other features claimed for the new fiber lubricant are: (1) Water emulsions containing as much as one part

of oil to one part of water are still fluid enough to be used in fine spray application systems; (2) exceptional emulsion stability; (3) outstanding ability to resist yellowing, staining, and the development of rancidity and other odors upon aging; (4) excellent scourability; (5) very effective inhibitor of corrosion and rust.

Emery Industries, Inc., Carew Tower, Cincinnati, Ohio.

For additional data, request item H-119, using business reply card on page 196.

Non-Toxic Fungicide Paint

A mildew-resisting enamel containing a non-toxic fungicide for use in areas where mildew control is a serious problem, has been developed and is now being trial marketed. Employing "Cunilate" fungicide, or copper-8-quinolinolate, it can save many dollars in plants plagued with wall and ceiling mold growths, the manufacturer claims.

Panels painted with the enamel and exposed over 18 months are said to be still mildew-free in rooms where ordinary paint is covered with a profuse mold growth within two months.

Because the finish contains a high percentage of "Cunilate" to the gallon, it has a greenish-yellow cast not regarded as sufficiently pronounced to be objectionable.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

For additional data, request item H-121, using business reply card on page 196.

80-Cubic-Foot Hopper on 4000-Lb Lift Truck

A 4000-lb capacity high-lift platform electric truck with an 80-cubic-foot end-dump hopper is available, having been designed for handling bulky loads of loose material. Hopper can be tilted downward to scoop up loads, or it can be loaded from overhead. Platform elevating mechanism of truck is used to dump hopper.

Yale & Towne Mfg. Co., Philadelphia Div., Philadelphia 15, Pa. (H-502).

Torsion Balances Feature Speed and Accuracy

A new line of laboratory balances is constructed on the torsion principle which, according to the manufacturer, has practically eliminated wear and the inaccuracies caused by dust and dirt. Also featured is a new oil dash

BUT only after 15 months' use. 207 picks per min. 2 shifts per day

COST PER LOOM HOUR—.0004c

That's the sort of service Champion Endless Check Straps give — close to 80,000,000 picks. Some give more — some less, depending on conditions — but you can *always* count on Champion to better the service record of any other brand. Expertly made from the finest imported steer hide money can buy.

ENDLESS CHECK STRAPS

W. D. DODENHOFF COMPANY
INCORPORATED
GREENVILLE, SOUTH CAROLINA

NEW Equipment AND MATERIALS

pot that is said to cut weighing time to 1/5 of that formerly required. Available with round pans, flat pans, or scoops. Slide weights on the graduated beams will not cock and introduce errors, it is claimed.

Torsion Balance Co., Clifton, N. J. (H-503).

Six-Inch Dial Indicator for Temperature, Pressure

Developed to meet the requirements of many temperature, pressure and load applications in industrial processing, a newly designed dial indicator is suitable for instrument panels and for individual mounting. White graduations and numerals on black background. Indicator easily adjustable for accurate zero settings. Features stainless steel movement designed to eliminate linkage errors.

For temperature applications, four types of actuation are available: mercury, vapor, gas or organic liquid (Monolex). Ranges from minus 100 to plus 1200 F. For pressure applications: range spans from 12 to 20,000 psi are available. Tension and compression load elements can also be incorporated in the instrument for load applications with ranges from 0 to 75,000 lb.

Taylor Instrument Companies, Rochester 1, N. Y. (H-504).

BIGGER PACKAGES
ON YOUR PRESENT FRAMES

WITH LARGER RINGS, LONGER TRAVERSE AND
WHITEHEAD *Permalite*
ALUMINUM ALLOY
SEPARATOR SHIELDS

There's a shape and size that will exactly fit your requirements

They're as strong as steel but many times lighter, reducing weight as much as 250 pounds per frame. This means you can use lighter travelers, reduce wear on rings, travelers, cams, worm gears and lifter-rod bearings. Save power, too.

Permalite Shields mount right on the ring rail and can be flipped back for doffing.

And with all their superiority Permalite Shields cost no more!

ENGINEERED TO FIT YOUR NEEDS—When ordering, specify rail width, thickness of back flange, and gage and number of rings in each rail on one side only, as 24-22-22-22-24.

EASY TO INSTALL—Simply drill and tap ring rail. We supply the shields and bar drilled to your gage and ring count, together with proper support hangers and all screws and washers.

Features that defy comparison

- Fewer ends down; some mills report 27% less
- Solid polished blades (not slotted) mean less wear on yarn. They collect less lint and fly, resulting in smoother yarn
- Less vibration—aluminum is self damping
- No attention after installation

OVER 6,000,000 IN USE BY MORE THAN 350 MILLS

Immediate delivery from stock on all items

PATENTED AND MANUFACTURED BY
WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N. W.
ATLANTA 3, GEORGIA
EXCLUSIVE DISTRIBUTORS
Meadows Manufacturing Co.
MURPHY & ASTOR AVES., S. W. ATLANTA, GA

*SEE YOUR MEADOWS MAN
ALABAMA, GEORGIA, MISSISSIPPI
Sam Hogg, 1094 McConnell Dr., Decatur, Georgia
SOUTH CAROLINA
J. P. Coleman, Box 3597, Greenville, S. C.
NORTH CAROLINA
Walter Coleman, Box 782, Salisbury, N. C.
TENNESSEE
Ed F. Brown, 417 Dale Ave., Knoxville, Tenn.
NORTHERN REPRESENTATIVE
Matthews Equipment Co., 83A Broadway, Providence, R. I.

Creel Stop Motion Electrically Operated

An electrically operated creel stop motion which, according to reports, can be adapted to any type of cone creel is almost totally enclosed for use in areas where dust and fly are prevalent.

The apparatus features rising stop levers which are held in a depressed position by the slightest thread tension and leap upwards when an end breaks. Design of these levers is such that they are counter-weighted rather than spring loaded; consequently, there is no possibility of variation in the amount of tension required to keep them in the operating position.

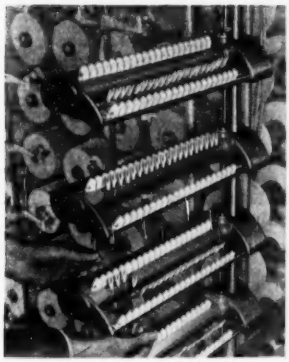
Each lever has its own electrical contact made of silver. Oxidation of the silver points does not affect their functioning, it is claimed, and the stop motion will continue to work indefinitely without any attention to these contacts.

Porcelain thread guides on the stop levers are shaped like a fork. Used in conjunction with them are open-ended thread guides which make threading-up easy and rapid since all that is required is for the thread to be laid across the guides and in the fork, no hooks or other appliances being required.

When an end breaks, a slight upward movement of the stop lever is sufficient to close the silver contact, and the warper is stopped instantaneously.

The fulcrums of the stop levers and the contacts are housed in an almost totally enclosed aluminum tube.

Another feature claimed for the new creel stop motion is the provision for locking in the inoperative position any stop levers which are not required. Stop levers that are not needed are simply depressed while a switch on the side of the unit is put into the running position. These selected stop levers are then rendered inoperative. The same switch



Benninger electrically operated creel stop motion is almost totally enclosed.

is used to make a complete bank of levers inoperative; the switch is simply moved from one position to the other.

On each bank is a red signal lamp which indicates that a breakage has occurred in that particular bank. This lamp is placed in such a position that it can be seen either from the front or the back of the creel. Should a lamp burn out at any time, the wiring of the stop motion is such that this will not prevent the device from operating.

Benninger Engineering Co., Ltd., Uzwil, Switzerland.

For additional data, request item H-505, using business reply card on page 196.

Device Measures Thermal Conductivity of Textiles

The insulating quality of blankets, overcoats, and other fabrics can be tested accurately and quickly, a laboratory equipment manufacturer reports, by an instrument which until recently was thought to be capable of measuring the thermal conductivity of only such materials as blotting paper, wallboard, glass, and all types of insulating materials.

Not only can warmth-retention qualities of various fabrics be compared; the lack of thermal conductivity can also be measured, providing a positive means of determining the most comfortable fabrics for summer as well as winter.

A layer of the material to be tested is brought in contact with the measuring device which is filled with boiling water and kept at a constant temperature by an immersion heater. The material is then placed on a re-

Institute a program of inspecting each frame twice a year. Worn saddles, like travelers, must be replaced on a regular schedule. Mills report these:

Proven Advantages

- ✓The program pays for itself
- ✓Yarn imperfections are reduced, efficiency increased
- ✓Newest type saddles gradually replace less efficient models
- ✓Incorrect saddles, faulty weighting installations are eliminated
- ✓Spinning frames are rejuvenated without extensive shut-downs
- ✓Damaged top rolls eliminated
- ✓Maintenance costs are lowered

Ask how the newest Dixon saddles fit into a regular replacement schedule.

DIXON LUBRICATING SADDLE CO.
Established 1876 BRISTOL, R. I.

Southern Sales: R. E. L. Holt, Jr. & Associates, Box 1474, Greensboro, N. C. Covering the Carolinas and Virginia
J. W. Davis, Mfg'rs. Agent, Box 745, Columbus, Ga. Covering Georgia, Alabama, Mississippi, Louisiana and Tennessee
Northern Sales: W. R. Potter, Sales Manager, Dixon Lubricating Saddle Co., Bristol, R. I. Covering New England

ceiving block of metal of known heat capacity. The temperature changes in the receiver, as affected by the heat being conducted through the material, are measured by means of a thermocouple, and the rate at which the receiver increases its temperature determines the insulating value of the fabric.

The instrument is said to be simple to operate and non-destructive to the material being tested.

Central Scientific Co., Chicago, Ill.

For additional data, request item H-102, using business reply card on page 196.

New Geigy Dyes

Polar Red BL is a new dyestuff which, the manufacturers claims, fills the need for a blue shade of red with exceptionally good light fastness that will exhaust well from a neutral bath. Another feature cited for this color is its ability to dye a solid shade on tippy wool.

It is the manufacturer's belief that Polar Red BL will prove to be very useful for the dyeing of slubbing, raw stock, and union goods where the end use requirements call for extremely good light and wet fastness. Polar Red BL is also well adapted for the dyeing of spun or filament nylon, either raw stock or piece goods, according to reports.

Another new dyestuff, Solophenyl Brown B L, is said to produce pleasing shades with excellent resistance to light. Anti-crease urea formaldehyde aftertreatments do not materially alter the shade and have very little influence on the light resistance of this dyestuff, the manufacturer claims.

The product reserves acetate when dyeing mixed fabrics containing cotton or viscose rayon and acetate, and can therefore be used for producing browns to replace blue, red, and yellow mixtures.

Geigy Company, Inc., 89-91 Barclay St., New York 8, N. Y.

For additional data, request item H-107, using business reply card on page 196; please specify product.

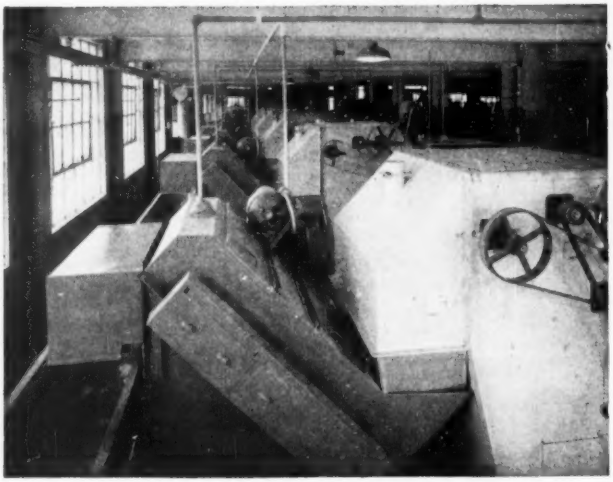
THE "JUNIOR CLEANER"

(Pat. Pend.)

Does a "Man-Size" Job!

For use between hopper and conveyor.
Delivers to regular cleaning line.
Completely opens and pre-cleans small amount of cotton delivered to each hopper in battery, so that machines in regular cleaning lines do *more cleaning* with *less staple breakage.*
Requires 43" between hopper and conveyor table.

PROVED BY TEST



Shown above is a complete installation of "JUNIOR CLEANERS" in opening room of an Alabama mill.

Manufactured by

GASTONIA TEXTILE MACHINERY CO.

GASTONIA, NORTH CAROLINA

Fire Extinguisher Remains Free of Corrosion

A one-quart fire extinguisher now on the market will, according to the manufacturer, remain free of corrosion. The patented corrosion arrester in the General Quick Aid Fire Guard is said to be a definite part of the pump which purifies the liquid and eliminates corrosion. Outstanding dependability and ease of operation are claimed. Described as ideal for on-the-spot protection in factories and for fighting gasoline, oil, and electrical fires.

The General Pacific Corp., 1501 East Washington Blvd., Los Angeles 21, Calif., or The General Detroit Corp., 2272 East Jefferson Ave., Detroit 7, Mich. (H-507).

Hand Lift Truck Handles Skids and Pallets

Hand lift pallet trucks are now available with a dual-purpose superstructure that will enable them to handle 7" and 12" skids as well as single or double faced pallets. When the superstructure is in a raised position, it is clamped vertically to provide a backrest for the pallet load on the truck. When lowered, it is adjustable to either 7" or 12" skid

Yale & Towne dual-purpose hand lift truck for skids and pallets.

heights by a simple cam and slot arrangement.

This truck will find application, the manufacturer feels, in plants where there is not sufficient volume of either skids or pallets to keep busy a specialized truck for each or where flexibility is desired because of varying loads. Mechanical or hydraulic lifts available. Platform trucks can be similarly equipped to handle several sizes of skids.

Yale & Towne Mfg. Co., 11,000 Roosevelt Blvd., Philadelphia, Pa. (H-506).

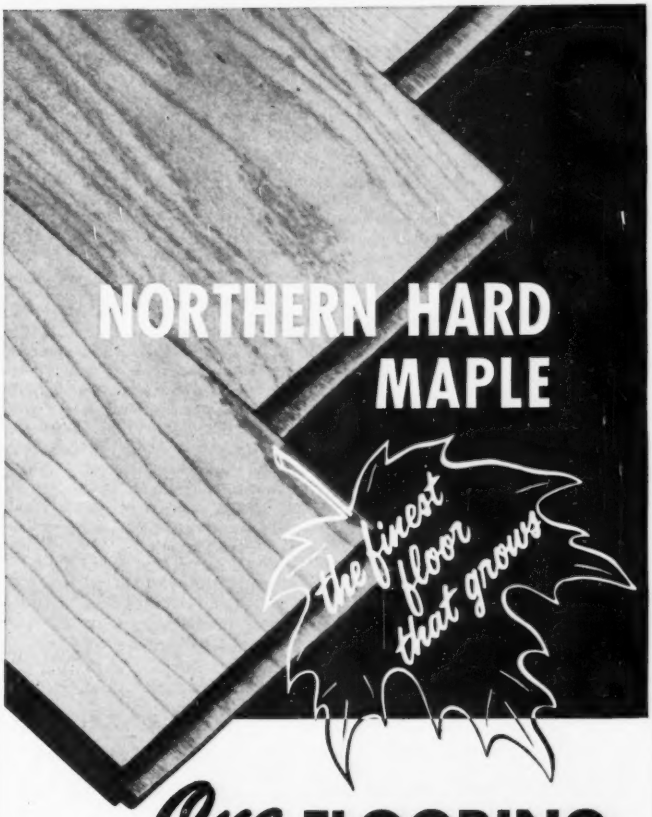
New Developments in "Everglaze" Processing

New developments in the processing of "Everglaze" fabrics have been announced.

Up to the present time, the manufacturer states, the application of wrinkle-resistant properties, for example, has been limited to certain types of weaves and constructions, due to the effects of resins on the fibers and fabrics. These new developments, he claims, make it possible for many new fabric constructions to be finished so that almost an endless number of additional fabrics will acquire the qualities of "Everglaze."

Also, fabrics with new and unusual three-dimensional qualities can be produced. Other results said to be possible to achieve include varying lustres and the transformation of woven cotton suitings and dress fabrics into non-lustrous fabrics.

All the new surface effects will be completely durable, the manufacturer claims. Improved durability and wearing strength are reported to become part of these fabrics, as well as increase in their abrasion resistance. The abrasion resistance increase is considerable in the case of spun vis-



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And this is *why:* Northern Hard Maple is *resilient.* It is bright and smooth and tight. It is warm and dry and doesn't splinter. Simple brushing cleans it. It's easily re-surfaced. It's hard to dent or scuff. It creates no dust, catches no lint. *Everybody* likes to walk on it, stand on it, *work* on it. *See Sweet's* Arch. 13k/MA for data, or write:

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FLOOR WITH NORTHERN HARD MAPLE
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NEW Equipment AND MATERIALS

cose types, the announcement indicates. Washability or dry cleanability, shrink and stretch resistance, mildew resistance, hand, crispness, beauty, etc. are also said to be improved as a result of these developments.

Joseph Bancroft & Sons Co., Wilmington 99, Del.

For additional data, request item H-109, using business reply card on page 196.

New Books

An English edition of the book *Silk: Biology, Chemistry, Technology*, by Dr. Paolo Carboni of the Silk Experiment Station, Milan, Italy, was recently published by Chapman & Hall Ltd., 37 Essex St., London, W. C. 2, England. Beginning with a chapter on the cocoon, the 248-page cloth bound book has chapters dealing with the chemical structure of silk, the seric bave, reeling, testing, throwing, dyeing, waste silk processes, and finally analysis of loaded silk and mixed fabrics containing silk.

Economics of American Manufacturing, by Edward L. Allen. Publisher: Henry Holt and Company, 383 Madison Ave., New York 17, N. Y. Price: $6.95. Nineteen representative industries are examined within five general categories: basic metal, basic non-metallic, metalworking, textile and allied, and consumer specialty. Included within these groups are automobiles, machine tools, aircraft, cotton textiles, synthetic fibers, and other components of American technology. Following an introductory chapter on the place of manufacturing in the American economy, the author analyzes each industry from three standpoints: (1) its setting in the national economy; (2) structure of the industry; and (3) financial factors. The concluding chapter is devoted to sources of industry data and an extensive bibliography. 566 pages, cloth bound.

Technical Reporting, by Joseph N. Ulman, Jr., of Massachusetts Institute of Technology, is a handbook designed to show engineers, scientists, technicians, etc., how to convey technical information and ideas accurately and efficiently—written or oral, formal or informal—in simple, clear, good English. Contained in the 289-page book are chapters on important fundamental principles, general procedure, informal and formal reports, laboratory reports, technical papers, oral reports, writing (style, grammar, and punctuation), visual presentation of information, etc. Publisher: Henry Holt & Co., Inc., 383 Madison Ave., New York 17, N. Y. Price, $4.75.

Industrial Waste Treatment, by Edmund B. Besselievre, chief sanitary engineer, international sales, The Dorr Co., was written to help plant management find a satisfactory solution to industrial waste problems. Discussed are: the nature and cause of the problem, the legal factors involved, methods of abating or eliminating stream pollution, and the economical aspects that will enable the starting and execution of a suitable program for a particular situation, equipment for waste treatment and its selection, reuse of wastes and recovery of values. 391 pages, cloth bound. Publisher: McGraw-Hill Book Co., Inc., 330 West 42nd St., New York 36, N. Y. Price, $7.00.

The results of a study of the cotton spinning and weaving industry of Brazil, Chile, Ecuador, Mexico, and Peru by the Economic Commission for Latin America have been published in a report entitled *Labor Productivity of the Cotton Textile Industry in Five Latin-American Countries*. Purpose of the study, according to the introduction to Chapter 1, was to determine the factors influencing labor productivity in this industry; also to ascertain the extent of certain problems which have prevented the technical development of this industry from following a course similar to that of more advanced textile industries. Furthermore, it was believed that an analysis of the results of the investigation could give rise to recommendations for the improvement of conditions in the mills. A chapter on the industry in each of the five countries studied contains a summary of findings and conclusions, including productivity of the industry and causes of low productivity; also comments, results, and analysis of the old and modern spinning and weaving mills. Methodology is described in the concluding chapter. 293 pages, paper bound. Publisher: Columbia University Press, 2960 Broadway, New York 27, N. Y. Price: $3.00.

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LOWER COST PER YARD

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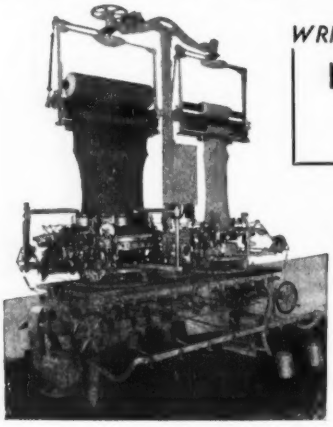

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NEW DATA SHEET

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This new data sheet gives you the kind of cost, production and quality information you've been looking for—it shows actual machine comparisons with the NEW TOMPKINS D-2 DOUBLE HEAD SPRING NEEDLE KNITTING MACHINE shown here. The subjects covered include: Fabric Flexibility; Perfect Rolls of Cloth; Needle Breakage Reduced One-Half; and Needle Savings!

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Textile Industries

Volume 116 Number 8
AUGUST, 1952

John C. Fonville
Editor

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Milton C. May — Paul M. Platzman, 22 Ridge Drive East, Flower Hill, Roslyn, N. Y.
H. B. Anderson

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Many, many years ago Adolphus Busch, co-founder of Anheuser-Busch, defined the reason for his company's growing success and reputation ... "Making Friends is Our Business." Today, celebrating our 100th Anniversary, Anheuser-Busch still keeps faith with that same principle in all the phases of our business: Top quality for all Anheuser-Busch products... wholehearted, sincere service to our customers ... and a continuous program of research and development to seek even better things for all the industries the company serves.

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FOR THE TEXTILE INDUSTRY

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Products of 35 years of Know-how, plus constant research.

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RESILIENT, UNBREAKABLE HEADS

Allen wooden warper beam heads are superior in use because they will spring without taking a set. Laboratory deflection tests up to 15 tons leave these heads unaffected. We are constantly working to improve our heads. The results do not show to the eye, but they do show up in operation, in longer beam life and yarn protected from damage.

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Extensive research has enabled us to develop beam barrels that withstand the pressures of the new synthetic yarns. Warps are built uniformly with no soft cores, and no trapping of yarn at heads.

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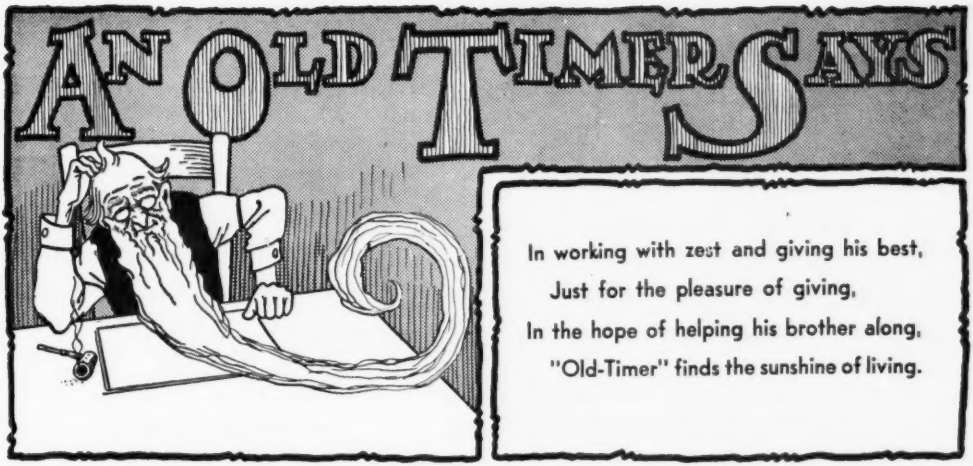
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

How to Make Employees Feel They Are Part of "It"

Those many years ago when OLD-TIMER started out in the textile manufacturing business, unionism was not one of the problems confronting textile operating executives in the South. As the unions gathered membership, OLD-TIMER has made every effort to discover why normally-contented operatives will listen to the often exaggerated claims of union solicitors. There are quite a few facts, proved facts, which many overseers and superintendents do not seem to realize; that is, high wages do not prevent strikes, but tend to increase them.

Employees generally rank *pay* less important than fair treatment and a feeling of being something besides a cog in a wheel. They like to feel they are a part of "It" so to speak.

OLD-TIMER still believes that a plan whereby operatives may be entitled to purchase preferred stock (not common stock) as outlined and explained on this page, is the soundest, most practical, and best incentive appealing to operatives of any one idea ever presented to mill presidents and treasurers.

OLD-TIMER spent several months consulting with prominent textile attorneys and studying the details of several firms (not textile) which use the plan before presenting it on this page. Some textile firm is going to adopt some such plan sometime in the near future and meet with the same success some firms in other industries have.

Ability or Adaptability

WELL, FELLOWS, looking back over the years, yea lots o'years, OLD-TIMER comes to the conclusion that he has seen more young men of adaptability succeed than men of ability.

Sure, we know most of you readers will challenge that statement, but probably you have not given the idea much thought yourself. First run back over the list of men you have known who grew up to be successful overseers and superintendents and managers. How many were college graduates? How many would you have said when you first knew them (and before they became successful)—"that man has ability."

See what we are driving at. It's not ability but adaptability which causes most men to achieve success. Many men with high ability cannot adapt themselves to the local conditions of their jobs. Therefore, they just never do exactly fit that job. This fact should cause you to reflect and analyze your work.

SMOOTH

The traveler sails around Ragan Rings with the greatest of ease, because of the special Ragan AERO finish — hard and brilliant. Angle web means no traveler back-tracking. Stick to Ragan for standard spinning and twisting rings. Come to Ragan for special requirements.

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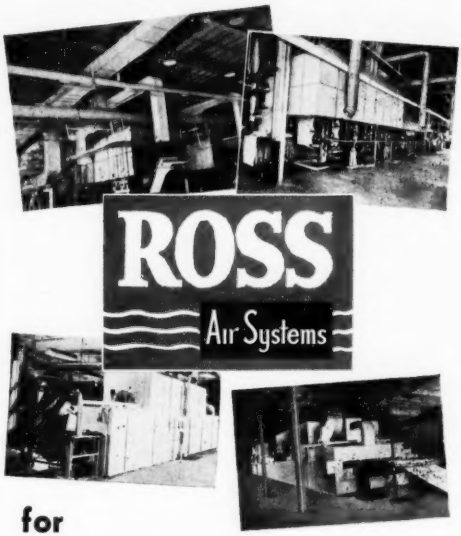
The Industry's Leading Finishing Plants Operate



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HEATING VENTILATING
DRYING COOLING
CONDITIONING

Each new installation of the modern ROSS Air Systems throughout the textile industry further testifies to their effectiveness in achieving greater production efficiency and operating economies. They are fast becoming standard equipment for confining and removing vapors, to speed drying, to prevent spoilage from condensation, to eliminate fog, to provide comfortably cooled working areas and similar requirements. Investigate the possibilities for your plant.

Write For This 20 Page BULLETIN 30

Fully illustrated, it describes ROSS Systems for various departments.

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Personal NOTES ABOUT MEN YOU KNOW

E. O. Buhlmann has left the Globe Mills of American Woolen Co. to become manager of a new worsted mill at Mount Holly, N. C., a subsidiary of American Yarn & Processing Co.

Burnet Valentine, formerly vice-president, was recently elected president of A. D. Julliard & Co., Inc. He succeeds Robert Westaway, retired. **Robert Westaway, Jr.,** and **John S. Thompson** were elected vice-presidents; **Frank Conklin,** secretary; and **Wesley Lang,** comptroller. **F. J. McKenna,** vice-president, was also elected treasurer.

W. M. Dutton is now superintendent of Burlington Mills Corp.'s Franklinton, N. C., plant. Succeeding him as assistant superintendent of the Newton, N. C., rayon plant is **Noel Garvin.**

John McGowen has been made manager at the Pittsfield, Mass., plant of Wyandotte Worsted Co. Succeeding him as assistant general manager is **George M. Chappell. Edwin F. McGowen,** formerly at the Rochester, N. H., plant, has taken Mr. Chappell's place as agent at Pittsfield.

The Wool Associates of the New York Cotton Exchange, Inc., have announced the re-election of **E. Bradford Keith,** Walker Top Associates, as president. Vice-presidents are **Philip B. Weld** of Harris Upham & Co., and **Freeman E. Maltby** of MacDonald & Maltby, Inc. **Frank J. Knell** has been made treasurer.

J. Byron Wilson, president of the American Wool Council, was recently elected chairman of the board of directors of The Wool Bureau, Inc. **Ewen Waterman** was elected chairman of the Wool Bureau's executive committee, and **Harry J. Devereaux** was made a member of that committee.

Roy Burdette of U. S. Rubber Co.'s Stark Mill cost department has been transferred to the New York office textile division, where he will do cost work on a more extensive basis. **George W. Funderburk** has been promoted to supervisor of labor standards for Stark, Reid, and Asbeston plants, Hogansville, Ga.

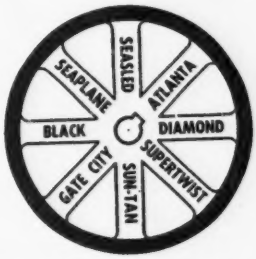
At the Seminole Mills of United Merchants and Manufacturers, Inc., Trion, and **William E. Ashley,** second hand in the card room, has taken over Mr. Cooper's position as overseer of the warp yarn mill. **George W. Collett,** with the firm for six years as job analyst and safety administrator, is now assistant personnel manager.

Promotions at Riegel Textile's Trion Plant

J. A. Salley, former cloth-room supervisor, is now assistant superintendent at Riegel Textile Corp.'s Trion division. He succeeds **W. A. Pearson,** transferred to the Ware Shoals division. **Mark Cooper** is now overseer of the cloth room at

Mr. Salley Mr. Ashley Mr. Cooper

The Right BELT
makes any Drive RIGHT



Correct Use of the PROPER TYPE Leather Belt on any flat belt drive makes the drive RIGHT, increases machine production, reduces down time, lengthens belt life, and saves you money. On this simple truth our business has grown for over twenty-five years.
We can save *YOU* money by putting the *right* type drive on each one of your machines, the *right* type belt on each one of your drives and the *right* type strap on each one of your looms.

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"SPECIALISTS IN BUILDING BELTS TO SUIT YOUR DRIVE"

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Bobbins and Cones made from the finest New England Hard Rock Maple and selected Hard Mountain Beech and Birch.
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WE ARE LICENSED TO MANUFACTURE TUBES FOR
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3

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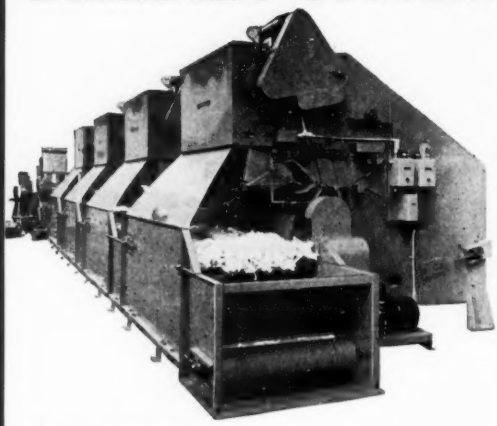

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System is engineered to your specifications

Last yarn made from blend is identical with the first

Whether the Proctor blending system installed in your mill is semi or fully automatic you can be sure it will be engineered in every detail to your individual requirements and because of this will offer you many important profit-making operating advantages. In many mills using Proctor equipment blending is so thorough and accurate that the variance in the blend is less than 1%. Not only is the mix properly proportioned—but the proportion remains the same throughout the run. This means that the last yarn made from the mix is identical with the first. This is especially important in the blending of synthetics. The system illustrated consists of several weighing feeds with skewing aprons set over a constantly moving long apron which feeds to a picker. The number and kinds of units to be incorporated in a system depend upon many factors which are revealed by a detailed discussion of your specific blending problems. Call on Proctor engineers today to show you how a Proctor system can increase your profit.

Much Proctor drying equipment and textile machinery is covered in full or in part by patents and patents pending.

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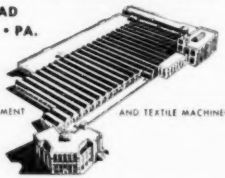

MANUFACTURERS OF INDUSTRIAL DRYING EQUIPMENT AND TEXTILE MACHINERY

Personal NOTES ABOUT MEN YOU KNOW

Statesville, N. C., **Ray Gosnell** has been promoted from third shift loom fixer to third shift overseer in the weave room.

William Argo has been made manager of the Carrollton, Ga., plant of Stylewise, Inc.

A. E. Winslow has resigned as manager of manufacturing research for J. P. Stevens & Co., Inc. **William A. Griffiths** has been appointed director of recreation for the Utica and Mohawk Cotton Mills division of the firm.

Matthew J. Cuffe of Brune, Nadler & Cuffe was elected to succeed Harold H. Pratt of Southeastern Cottons, Inc., as president of the Textile Export Association of the United States.

Charles G. Voss, formerly superintendent, is now agent of the Sauquoit plant of Standard-Coosa-Thacher Co.

William J. Brooks has been made assistant superintendent at the HDV Division dye plant of Callaway Mills Co. **Bruce Bozeman,** overseer of the card room at the Manchester plant, has been elected president of the Chattahoochee Valley Alumni Chapter of the Phi Psi honorary textile fraternity.

Jared J. Mowry, senior vice-president, has assumed the duties of president of the United States Finishing Co.

The Association of Cotton Textile Merchants of New York has announced the election as chairman of the financial group of **J. Ward Woolley,** treasurer of Bates Fabrics, Inc. He succeeds Gordon L. Hudson of McCampbell & Co., Inc.

The Georgia section, American Society for Quality Control, recently elected as chairman **Jim Wheeler** of Canton (Ga.) Cotton Mills. **Miss Mary**

Jo Wesson, research department, West Point Manufacturing Co., was elected vice-chairman; **J. B. Denmark,** Pepperell Mills, Lindale, Ga., secretary-treasurer; and **John Reynolds,** Celanese Corp. of America, Rome, Ga., national representative.

At a recent meeting of the board of directors of Dundee Mills, Inc., Griffin, Ga., **Floyd C. Newton, Jr.,** was elected treasurer and **John H. Cheatham, Jr.,** was named assistant to the president. **E. C. Hulsey** continues as secretary.

Marshall Gardner has been named manager of the Print Works Plant of Cone Finishing Co., with **Gordie Boyd** succeeding him as superintendent. **George Brandt, Jr.,** was made assistant superintendent, and **Roy Phillips,** head of the color shop. These promotions were announced by **Sydney M. Cone, Jr.,** vice-president of Cone Mills Corp., formerly manager of the print works and now responsible for the firm's newly acquired Union Bleachery at Greenville, S. C., as well as Cone Finishing Co.

The Controllers Institute has announced the election to its membership of **James R. Duncan,** assistant treasurer-division controller of the Lumite Division, Chicopee Manufacturing Corp., and **Leonard A. Stern,** comptroller, Century Ribbon Mills, Inc.

New president of Interwoven Stocking Co., New Brunswick, N. J., is **John W. Meitler, Jr.,** who succeeded his father, deceased. **Harold W. Simmons** and **James A. Power** were elected vice-presidents, and **John P. Redwood, Jr.,** was named secretary and treasurer.

Frank B. Bradley has resigned as vice-president and general manager of the Eagle & Phenix Mills, Columbus, Ga., a subsidiary of Reeves Bros., Inc.

James C. Self, president of Greenwood (S. C.) Mills, Inc., has been named to the South's Hall of Fame for the Living, according to Col. Hubert F. Lee, editor of "Dixie Business." This publication each year nominates 25 of the South's leaders for this honor.

Walter G. Regnery, president and general manager of Joanna (S. C.) Cotton Mill Co., was recently named a collaborator of the Cotton Mechanical Processing Division, Southern Regional Research Laboratory. He will advise on the planning and exe-

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Warp Preparation Equipment

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Creel Stop Motions

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STEEL HEDDLE COMPANY of CANADA, LIMITED

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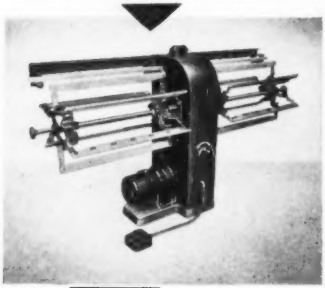
INCREASE
operator productivity
25% to 100%



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SKEIN REELER
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- √ Adjustable yarn traverse
- √ Automatic brakemotor
- √ Pedal brake release
- √ Push button start-stop switch
- √ Electric Stop Motions
- √ Enclosed drive, safe, compact
- √ Universal yarn creels

ADVANCED DESIGN BOOSTS ECONOMIES

New design makes this high-speed Fidelity Skein Reeler so easy to run that one operator can handle several machines. Automatic features increase labor productivity 25% to 100%. Space-saving double end (as shown) and single end models available for cotton, nylon, rayon, silk, wool and worsted yarns, tapes, and laboratory uses.

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cution of the laboratory's research program, according to Dr. C. H. Fisher, director.

Gordon F. Graham has joined the National Association of Wool Manufacturers as public relations advisor, a newly created post. He was previously editor of the woolen and worsted section of the Daily News Record.

O. A. Seay has been named to the newly created position of production manager at Airmaid Hosiery Mills, and will coordinate production at the firm's New Braunfels and Dallas,

Mr. Seay and Mr. Westmoreland

Texas, plants. His headquarters will be at New Braunfels. **Richard E. Barth** continues as superintendent of the firm's knitting operations in New Braunfels, and **Charles Westmoreland** succeeds Mr. Seay as superintendent of the Dallas finishing mill. **John Killian** has been named head dyer at the Dallas mill.

John P. Abbott, after 59 years in textile finishing, has retired and moved to Seattle, Wash. For 24 years Mr. Abbott has been with Providence Dyeing, Bleaching, and Calendering Co., now out of business.

Ralph T. Marshall and **W. Gordon McCable, Jr.**, have been made vice-presidents of J. P. Stevens & Co., Inc. Mr. Marshall was also appointed a member of the manufacturing committee.

P. Huber Hanes, Jr., former vice-president in charge of manufacturing, has been made executive vice-president of the P. H. Hanes Knitting Co He succeeds Thomas D. Meriwether, who has retired after nearly 21 years of service.

Robert Moran has become associated with Glen Raven (N. C.) Mills as head of sales in the recently established tricot division.

The American Society for Testing Materials has announced the following new officers: **Dr. Harold L. Maxwell**, E. I. du Pont de Nemours & Co., Inc., president; **Norman L. Mochel**, Westinghouse Electric Corp., vice-president; **George R. Gohn**, Bell Telephone Laboratories, board member; **William H. Lutz**, Pratt & Lambert, Inc., board member; **Howard K. Nason**, Monsanto Chemical Co., board member; **Adolph O. Schaefer**, The Midvale Co., board member; and **Myron A. Swayze**, Lone Star Cement Corp., board member.

Personal NOTES ABOUT MEN YOU KNOW

Harvey Eastman was recently appointed general manager of American Thread Co.'s new plant near Sevier, N. C.

Ernest Morse has been made superintendent, and **Charles Whelan**, overseer of finishing, at Brunswick Worsted Mills, Moosup, Conn.

Jack Barry, director of public relations of the American Woolen Co., is now also personnel director. His headquarters are in Boston.

George H. Jackson has succeeded B. T. Webb, resigned, as president of Powdrell & Alexander, Danielson, Conn. **Bernard H. Schuessler** has been named assistant to the president, and **Frank Diedrich** is now general manager of the finishing division.

C. A. Shibbles has joined Baxter Woolen Mills, Somersworth, N. H., as overseer of picking. He was previously with the Sawyer Mills of American Woolen Co.

Martha E. Jungerman, assistant professor of Jacquard and color at Philadelphia Textile Institute, was recently awarded the Fulbright Scholarship for 1952-1953 to study textiles at the University of Leeds. The scholarship is granted by the State Department for promotion of international good will.

William A. Newell, formerly managing editor of "Textile World," has been appointed textile research coordinator in the School of Textiles at North Carolina State College. He succeeds Dr. Herbert F. Schiefer, who has returned to his duties with the National Bureau of Standards, from which he was on leave of absence the past year.

At the annual meeting of the Philadelphia Textile Institute **Theodore B. Hayward**, Swift & Co., was elected

chairman of the board, and **Rinaldo A. Lukens** of Continental Mills, Inc., was made president. **Fred C. Scholler,** Scholler Bros., Inc., was elected first vice-president; **Benjamin Gibbs,** Gibbs Underwear Co., second vice-president; and **Julius Ziegel,** treasurer. Trustees of the Institute are: **Henry H. Benedict,** Henry H. Benedict Co.; **Millard D. Brown,** Continental Mills, Inc.; **Benjamin Gibbs, Russell C. Osborne,** R. C. Osborne & Co.; and **Fred C. Scholler.**

Paul Groover has been elected to the newly created position of executive vice-president of Pacific Mills.

Mr. Groover

His headquarters will be in the executive offices in Boston.

Jerome T. Collins, recently elected vice-president, will be in charge of mill operations of the firm of Mock, Judson, Voehringer Co., of North Carolina, Inc., the largest operating subsidiary of Mojud Hosiery Co.

Horace Penn, formerly a research and development engineer at the Spray, N. C., plant of Fieldcrest Mills, has been made foreman of the dyeing and bleaching department of the Towel Mill at Fieldale, Va.

After more than 40 years of service with Textron, Southern, Inc., **Sam Lander** recently retired.

Roy W. Ivester, recently with Riverdale Mills, has joined Clinton Cotton Mills as cloth room overseer.

Joseph Broadbent, overseer of spinning at the Carleton Woolen Mills, Rochdale, Mass., has retired after 43 years of service with that company.

The Piedmont Section of the American Association of Textile Chemists and Colorists has announced the election of **M. M. McCann** as chairman. Mr. McCann is with Warwick Chemical Co. Other officers are: **Henry A. Rutherford,** N. C. State College, vice-chairman; **Clarence Hooper,** Burlington Mills Corp., secretary; **Herman J. Jordan,** Wiscassett Mills Co., treasurer, and **A. R. Thompson,** Ciba Co., Inc., custodian.

Obituaries

Ralph C. Shorey, representative for Howard Bros. Manufacturing Co., in New England and Canada, May 25.

William Reid Jackson, 65, former president of Mary Leila Cotton Mills.

Roddy A. Field, for a number of years associated with Newnan (Ga.) Cotton Mills and more recently chief textile engineer of Stevens Manufacturing Research, Greenville, S. C., June 20.

Thomas J. Callaway, Sr., 63, former, vice-president of Oak Leaf plant of Callaway Mills Co., La Grange, Ga.

W. W. Neal, Jr., president of Marion Hosiery Mills and recently elected director of the National Association of Hosiery Manufacturers, on June 2.

Garnett McMillan, Jr., 46, sales representative for the Peerless Woolen Mills, on June 5.

Joseph T. Lucia, 45, sales engineer with Proctor & Schwartz, Inc., on May 16.

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Perfect for Perfect Goods

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

What the TEXTILE MILLS are doing

Textileather Corp., Toledo, Ohio, recently held its fourth biennial open house which was attended by approximately 3000 persons. A plant tour included all of the firm's departments.

Harrill Hosiery Mill, owned by Andrew Harrill, Gordon Hollar, and J. J. Immerman, has been organized at Rutherfordton, N. C., for the manufacture of women's full-fashioned hosiery.

Republic Cotton Mills, Great Falls, S. C., have announced plans for expansion in the dye plant, to cost over a million dollars and to cover 27,000 sq. ft.

A branch of the **P. H. Hanes Knitting Co.** will be located at Sparta, N. C., according to the Chamber of Commerce of that city. The factory will be owned by the Alleghany Corp. of Sparta and leased to the knitting company.

Two 66-gauge full-fashioned hosiery machines have been purchased by the **Hoburt Hosiery Corp.**, New York, for its mill in Denton, N. C. The firm indicated that its knitting would be confined to 51-gauge and 66-gauge hosiery exclusively.

Machinery and equipment were sold at auction on June 4 by the 138-year-old **Providence (R.I.) Dyeing, Bleaching and Calendering Co.**

Fulton Bag & Cotton Mills, Atlanta, Ga., are constructing an addition to the finishing plant and bleachery which will provide 75,000 sq ft more of floor space. All operating areas will have fluorescent lights, and the roof will be cooled by standing water to reduce interior temperatures.

All remaining machinery at the Jackson Mill, Nashau, N. H., of **Textron, Inc.**, will be sold at auction on August 12. The building has been leased to the Kaiser Manufacturing Corp. of Willow Run, Mich. Machinery at Textron's China Mill, Suncook, N. H., has been sold to J. P. Stevens & Co., Inc.

Jordan Mills, Inc., Columbus, Ga., has doubled its capacity for package dyeing, added more new equipment, and built additional warehouse space.

Towne Processing Co., Philadelphia, Pa., has completed installation of new novelty yarn twisters, and the mill has been completely renovated.

M. T. Stevens & Sons Co. has announced the sale of its Penntucket Mill property at Haverhill, Mass.

The Southern Silk Mills, Inc., Kernersville, N. C., has been purchased by the **Burlington Mills Corp.** The silk plant has been closed for some months. An expansion and improvement program is being undertaken at the firm's Mooresville, N. C., mill.

Dean & Sherk Co., Inc., Lawrenceburg, Ky., has changed its name to **American & Efird Mills, Inc.**, to conform with the new name of the parent organization.

A new **American Thread Co.** plant is now under construction near Sevier, N. C. It will be 1,320 ft long and from 200 to 400 ft wide, and when it is completed the entire Kerr Mills plant at Fall River, Mass., will be moved there.

The American Woolen Co. has purchased a 78,000 sq ft building in Tifton, Ga., for its first plant in the South.

The plant, name, and equipment of **Barsol Finishers** have been purchased by Charles McNeill, partner at Allegheny Hosiery Finishing Co. Karl Goldecker, owner of Barsol, retired on July 1.

Chatham Manufacturing Co., Elkin, N. C., has plans for the addition of a worsted-type spinning unit for manufacturing both worsted and synthetic yarns. A small building will be erected to house the additional machinery, and it is expected that between 25 and 50 persons will be employed in the new spinning operation.

Chipman Spinning Mills, Easton, Pa., have closed and the company is being liquidated.

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GRANT BUILDING
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Gordon Scott, Jr., 15 Westminster St., Providence, R. I., is attorney and representative for the recently organized **Brownlow Associates, Inc.,** which will operate a mill for manufacture of textile products.

An expansion program, to cost around $700,000, has been announced by **Holeproof Hosiery Co.,** Milwaukee, Wis.

Montgomery Knitting Mills, Inc., has leased property at Centre, Ala., for operation of a branch mill.

Marion Mills, an affiliate of **Munsingwear, Inc.,** has leased a one-story building at Hamilton, Ala., under construction, to be equipped for manufacture of lingerie.

A one-story addition, for expansion in the knitting division, is planned by **Farmers Mill, Inc.,** Carrollton, Ga. 35 new circular knitting machines and auxiliary equipment will be installed.

Ellijay, Ga., has been selected as the site of a mill to be constructed by **Peerless Textiles, Inc.,** Cleveland, Tenn.

Central Yarn and Dyeing Co., Gastonia, N. C., previously engaged primarily in package dyeing of cotton and some spun rayon and nylon, is now undertaking a $250,000 expansion program to include package dyeing of synthetic yarns by a newly developed method.

Eight training seminars for new male employees have been instituted by the **William Carter Co.,** Needham Heights, Mass. These sessions cover many phases of underwear manufacture, and include talks by executives and department heads.

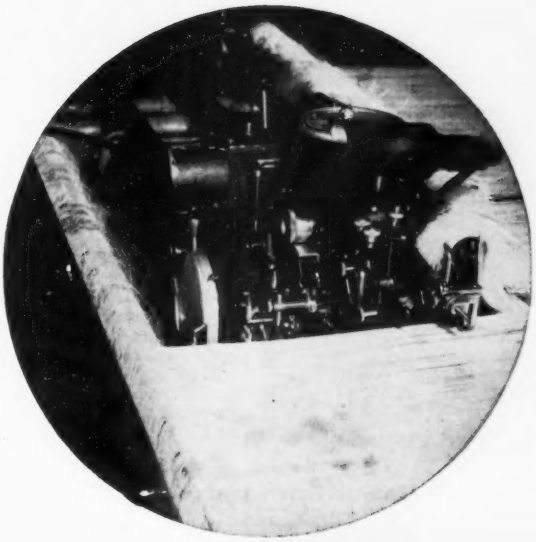
J. T. Flagg Knitting Co., Florence, Ala., is arranging for a merger with Utica Knitting Co.

Tufted Products Co., Inc., 47 Chestnut St., New Haven, Conn., was recently organized to operate a textile mill, with Mortimer J. Wallerstein as president.

R. F. Caron is president and Bernard Caron, vice-president, of the **Cago Weaving Co., Inc.,** Plainfield, N. J., recently chartered.

A tricot cloth mill will be operated by the **New Novelty Tricot Corp.,** 31 River St., Thomaston, Conn., recently organized. Bernard Turk is president.

The recently completed addition to the mill of **Mason Silk Thread Co.,** Winsted, Conn., will be used for in-



TITAN automatic warp tying machine assures:

INCREASED PRODUCTION	Ties leased and/or unleased warp up to 108" wide in one operation.
HIGHER SPEEDS	Speeds tying of all types of warps—cotton, wool, worsted, rayon, silk, etc.
REDUCED BREAKAGE	End breakage is reduced and loom stoppage is minimized.
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MILL PROVEN	Operating in many mills in U. S. and all six continents. In use for over 18 years.
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The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a Slasher Cloth that:

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What the TEXTILE MILLS are doing

creased capacity in the throwing and processing departments. With this expansion, threads of all types will be manufactured.

A tour through the mill, display of finished goods, speeches, and a barbecue marked the 50th anniversary of **Mandeville Mills,** Carrollton, Ga., celebrated on July 2. Honored guests were several of the company's original employees. Founded in 1900 by L. C. Mandeville and J. A. Aycock, the plant now has 625 employees. In 1950 a plan of group life insurance was inaugurated, and last year a company-financed retirement plan was established.

Opelika (Ala.) Manufacturing Corp. has let contract for construction of an addition to its Hawkinsville (Ga.) Mill division.

Charles J. McGowan is president and treasurer of the recently organized **Bedford Finishing Co., Inc.,** New Bedford, Mass. A dyeing and finishing plant will be operated.

Rainbow Dyeing Corp. has leased a one-story building at 76 Bartlett St., Brooklyn, N. Y., to be occupied for a new dyeing mill.

Buffalo Weaving & Belting Co., 260 Chandler St., Buffalo, N. Y., has plans under way for construction of a one-story addition to the plant.

Crusader Hosiery Mills, Inc., Mount Airy, N. C., was recently chartered for the manufacture of hosiery.

Carolinian Mills, Inc., High Shoals, N. C., is considering an expansion program which will include one-story extensions to the mill building and installation of additional equipment. Cost is expected to be around $875,000.

The cotton mill at the Speigner, Ala., state prison is undergoing a modernization program.

Cotton Industry Currently Convalescing

(*Continued from page* 103)

ports of 267,939,000 square yards of cotton goods, approximately equal to the total for the like period of 1951 despite export trade fears of a reduction.

In its buying the trade is currently recognizing the investment possibilities of textiles, Mr. Bell said. Although cotton has long held at better than 40¢ a pound, falling cloth prices have constantly trimmed the margin between fiber cost and cloth value "to the point where April registered the lowest figures of the postwar period." Narrow sheetings, drills, and print cloths "admittedly reached a point of profitless production." Fabrics at the mill level are now priced on a "bargain" basis, and in distribution "their basic attractiveness price-wise is being daily demonstrated."

Corrective curtailments applied to the market have materially strengthened it, he noted. While 1952 production due to a peace-time record first half reached 11,356,369,000 square yards of cotton goods, after export-import adjustment the availability for this country was only 10,599,727,000 square yards. Further, some 800 million yards went for military uses. While 68.67 square yards per capita of population were supplied, the civilian figure was only 63.49 square yards or less than the 1946-49 average of 64.59. Further a twelve-month production figure taken from July 1, 1951 to July 1, 1952, would show a per capita amount "well below what may be considered the normal needs of the nation."

The current "status is one of convalescence," the survey said, "which augurs a return of health without the fever of inflation or the chill of depression. The stage would appear to be set for an improved market for goods, better distribution, more confident operations in normal anticipation of forward needs and a restoration of values to levels yielding reasonable and proper returns to the mills."

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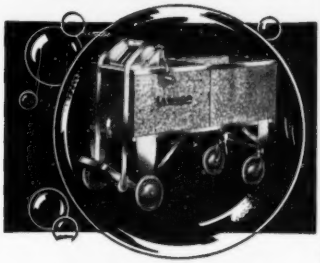

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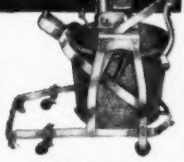

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EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together; the foot lever is perfectly balanced.

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

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S. C. LAWLOR CO.

Quality Floor Equipment for 50 Years

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An Executive Views the News in Textiles

(*Continued from page 79*)

would be considered good news, but in other parts of the trade it would be considered extremely bad news.

Of course, the Mississippi Congressman had to have some reason for his bill, and the one which he advanced was that in 1951 the Department of Agriculture—and a good part of the American nation—asked the cotton farmers to raise 16 million bales of cotton for the war effort. The farmers did this and then the price of cotton dropped to such an extent that it has been contended many farmers sustained a loss, or at least did not make as much as they expected to make. Mr. Abernethy felt that this was a deplorable situation and that for the coming year some restitution should be made. It was on this basis, apparently, that he concocted his current bill.

From the standpoint of the manufacturer, this is a most insidious type of legislation. What it actually amounts to is subsidization of the highest order, and, what is even worse, an indefinite sort of subsidization because no one would know just what was going to hap-

Labor Rulings

The Supreme Court has ruled in a 6-3 decision that an employer did not refuse to bargain by insisting on a "management functions and prerogatives" clause which would give it complete discretion over certain bargainable matters such as work schedules and discipline of employees.

The United States Court of Appeals for the Second Circuit has ruled that an employer may discharge an employee who refuses to perform part of his regular duties because he is unwilling to cross a picket line at another employer's premises.

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This is a sturdy truck upon which you can depend for long and satisfactory service.

Compare its specifications with those of any other fibre truck.

- .090 vulcanized fibre, securely riveted to hardwood rails with solid steel rivets. These solid rivets are placed at short intervals to prevent buckling.
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Washes flanged bobbins at 28 pieces per minute!

Textile mills throughout the country are finding the Nash No. 89 a time and money saver. It's a ten-spindle machine that does the entire washing and wiping operation automatically from start to finish. Eliminates the time and expense of hand washing. No dirt is left on the bobbin which would soil the yarn on the finished fabric. The cleaning solution used has a 140-degree flash point and is not toxic, assuring safe machine operation. The solution has no harmful effects on yarn, either natural or synthetic.

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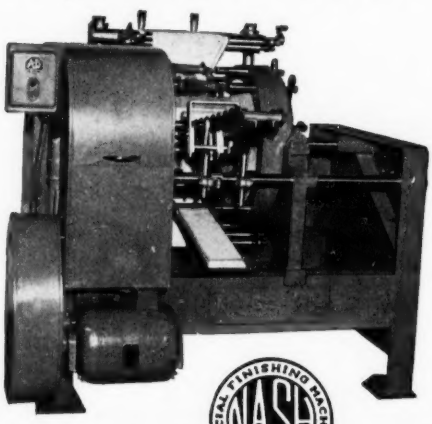
We also manufacture Automatic Bobbin Finishers, Quill Polishers and special-purpose machinery.



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Two-Bar Cotton Tricot Wears Well

Cotton tricot fabric, a two-bar knit cotton developed by the Cotton Research Division of Texas [A progress report on "Cotton in Tricot Knitting" appeared in TEXTILE INDUSTRIES for April, 1951, page 134], has been found to have excellent wearing qualities, according to Miss Ellen Wright, assistant professor clothing and textiles at Texas Technological College.

Several students have made outer garments suited to various occasions using cotton tricot, have worn them, and checked them from the consumer's point of view. Seamstresses find that the material is easy to sew and work with. Seams do not need special treatment because the weave prevents the raveling or running common to most knitted fabrics. Sleeves can be eased in without difficulty, and both piped and worked buttonholes can be made on two-bar tricot with ease.

The garments have been found to wear exceptionally well. The main difficulty encountered in the wearing quality is that stitching in some seams breaks in small places. However, it is said that this is not a weakness in the fabric, but a weakness in the home construction of clothing.

Shrinking or stretching in laundering is not enough to be of significance, Miss Wright points out. Garments made from the new tricot are rather heavy to wash by hand, but they launder nicely in a washing machine, she said. The material does not have to be pressed, but looks nicer when pressed, while dry, with a steam iron. If the tricot is sprinkled and ironed, it has the appearance of being unpressed. Travelers will like tricot clothing because wrinkles shake out after it has been folded, packed, or worn.

The material absorbs moisture from the atmosphere and tends to stretch slightly with moisture absorption; therefore, it is not good for wet climates.

The knit construction of the fabric allows it to give slightly. This allows for freedom of movement and makes clothes constructed from tricot comfortable to wear. The most practical and serviceable garments are casual and sportswear, but there have been attractive dressy dresses and formals made from the material. These dresses have been worn for over a year by students conducting the experiment. They still have their original shape and size and are very satisfactory dresses for year-around use. Laboratory tests proved the fabric to be durable and "dimensionally stable."

The Cotton Research Division is working on new finishes and designs for cotton tricot. When these are found to be satisfactory, the material may be made available for commercial production.

pen until after it had happened. A somewhat similar situation would be for the referee to change the goal for the home team after the quarterback had already thrown the pass.

This little bill, according to seasoned Washington observers, was felt to have very little chance of success when it was originally introduced. It was a sort of trial balloon that was sent up in the Washington heat so that the people back home could see it and could read the lettering on it, which very clearly said "I am a friend of the farmer."

However, when once the balloon got up in the air, those who were waiting with air rifles and slingshots to shoot it down could read the lettering also, and they became shaky in the knees and pale of face for fear that their farmer friends might also be able to see the balloon. So most of those who were watching this extravaganza dropped their air rifles and slingshots and, cheering loudly, grasped the ropes of the balloon and began to scale aloft. Any mention of the fact that this is an election year would be purely coincidental.

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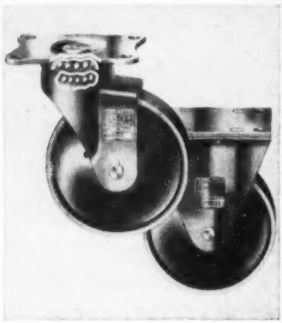

If you want maximum floor protection, economy and efficiency Demand Darnell Dependability...Made to give an extra long life of satisfactory service . . . . .

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VERSENE* (Regular)
prevents lead sulfide stains on Viscose fiber; increases detergency of synthetic and "natural" soaps; prevents insoluble soap deposits; *completely* and *permanently* softens hardest water. Complexes almost all metallic ion contaminants.

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This is the most powerful iron complexing agent known in normal pH range. For iron contamination problems only.

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Complexes iron and other metal ions such as calcium, copper, magnesium, cobalt, nickel, etc.

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LUBRITONE is our latest outstanding development in the softening and finishing field.

1. LUBRITONE has remarkable ability to soften fabrics and fibers.
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7. LUBRITONE is very economical and easy to use.

We highly recommend its use in the last rinse to lubricate package or skein dyed yarns.

Because of its lubricating action LUBRITONE greatly reduces needle cutting on resin finished goods when applied in the final rinse after curing.

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die will probably have been cast. Either we shall have taken another step down the road to socialism, or a few men with level heads and sane minds will have been successful in calling a halt. The Abernethy bill is another indication of what we have been talking about so long in this column, and that is that socialism comes in small and sometimes very pleasant doses. It is very seldom pink-colored. It usually has a chocolate-coated appearance and frequently it is awfully palatable.

If many more Abernethy bills become law, Nero had better find his fiddle.

Proper Nailing of Hard Maple Flooring Essential For Long Service

The Research Committee of the Maple Flooring Manufacturers Association met recently to consider the results of a research program, the objective of which was to develop practices that would provide the utmost in service for northern hard maple flooring.

The principal result of this first year of research has been to emphasize the importance of proper nailing in providing a long period of satisfactory service for hard maple flooring. Or conversely, the investigation emphasizes the probability of inadequate nailing as a cause for unsatisfactory flooring service.

The Association has approved an extension of the research program to permit the development of further information on obtaining the best possible service from maple floors.

Garnett One of Industry's Most Hazardous Machines

Unless properly operated and adequately guarded, the garnetting machine is one of the most hazardous in the textile industry, according to the National Safety Council.

A new educational publication of the Council, entitled "Garnetting Machines, Data Sheet T-10," explains that unguarded or improperly guarded machines even have caused the loss of life, but that the most common types of injury are those to fingers, hands, and arms.

Following is a list of six ways in which injuries to the operator may occur:

1. On hand-fed machines, fingers and hands caught at the pinch-point where the slots come together on the feed apron return, or may be lacerated by broken slots.

2. Hand caught by reaching in to clean feed rolls, or by attempts to spread stock too close to feed rolls while machine is running.

3. Injury when cleaning combing cylinders of the "workers" while machine is running.

4. Caught when cleaning machine from insecure footing or while standing in awkward position.

5. Caught in belts or on exposed gears.

6. During cleaning operations, eye injuries to operators or others.

For the control of these six groups of hazards, there is a suggested list of 13 different types of machine guards. These include protection of such hazard points as feeding apron, nip points, feed rolls, combing cylinders, belts and gears and shaft ends, value of continuous belts whenever possible, location of starting switch and emergency stop switches and cords, hazards at pit entrance, placement of side shields, secure footing for workers.

Another list of described hazards and suggested controls pertain to machine operating and cleaning.

Cuts Rayon Waste and Nylon Sliver On Two

TAYLOR-STILES CUTTERS

In the plant of a big producer of cut fibers, two Taylor-Stiles machines are the only cutting equipment. Shipments are made to customers in sliver or cut staple form.

No. 411 thread waste cutter, with taper box feed and no aprons. The 3-knife head, runs at 150 r.p.m. shown here cutting raw stock for garnetting.

No. 112 staple cutter is shown cutting nylon tow to 2" staple. Seven slivers are drawn from coils and cut simultaneously. Note the shearing set of the fly knives to the bed knife that produces efficient fiber cutting.

Taylor-Stiles No. 411 thread waste cutter gives bulk raw stock a random cut prior to garnetting, which is then made into coiled sliver.

Taylor-Stiles No. 112 staple cutter draws 7 slivers of nylon at a time from coils and cuts them simultaneously to accurate 2" staple lengths. Accumulated cuttings go directly to the baling press.

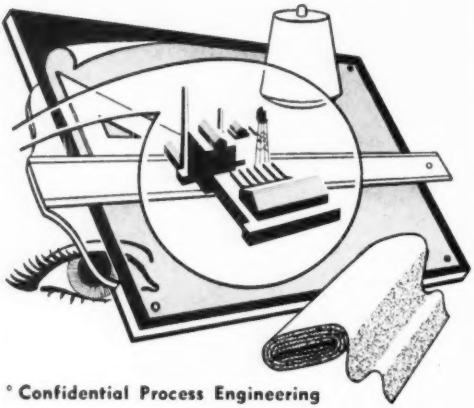
The No. 112 staple cutter is small enough to be taken to any place in the plant as desired.

TAYLOR-STILES and Company

CUTTING MACHINES & KNIVES

204 Bridge Street, Riegelsville, New Jersey

We call it CPE*



* Confidential Process Engineering

The engineering and construction of *special* bleaching and dyeing equipment has been the mainstay of our business for many years. Each of the many Allen installations now in operation in textile mills in this country and abroad was built to meet the specific requirements of each individual mill. In each case members of our engineering staff worked closely with mill engineers to solve a specific dyeing or bleaching problem. Our long experience enables us to offer you an unusually comprehensive knowledge of:

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The bleaching and dyeing of an ever-growing list of new synthetic and blended fibers and fabrics is, today, one of the textile industry's major problems. We will welcome the opportunity to place our specialized knowledge and manufacturing facilities at your disposal — to work with you closely, *and confidentially*, on research and development problems.

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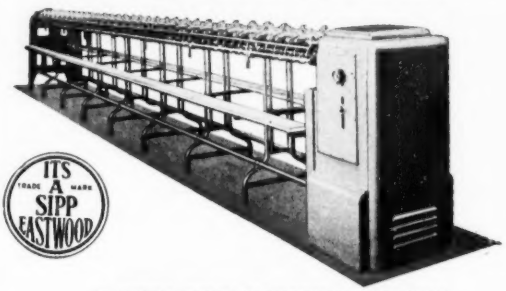

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- **SELF-OPENING SPINDLELESS ATTACHMENT**
- **FULL SPOOL STOP MOTION**

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FEATURES:

1. **Washer type self-threading tension** fastened to traverse rail is easily adjustable and quickly cleaned. Eliminates all threading operations.
2. **Gate type tensions** available with self-threading Alsimag guides for nylon.
3. **Full spool stop motion** prevents overrun bobbins.
4. The drive and traverse mechanism is enclosed in one complete unit and is lubricated by a circulating oil bath.
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7. Winds per stroke easily adjustable.
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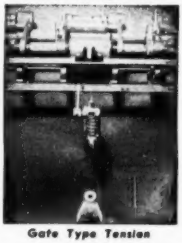
Full Spool Stop Motion



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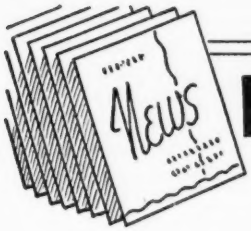

HELPFUL Booklets FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES' advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or new Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 200 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES' advertisers.)

This service is restricted to those engaged in operation and management of textile industries.

8-1. Knitting Machines. New booklet presents a general description of the types and styles of Wildman knitting machines. The booklet pictures each machine and gives full specifications on each along with advantages. Wildman Mfg. Co., Norristown, Pa.

8-2. Floors Without Flaws. The information contained in this booklet has been gathered from this company's practical knowledge of floor materials, combined with the finest laboratory facilities, and is a 12-page practical guide for economical and efficient care of floors. Widest variety of floor materials covered. A. C. Horn Company, Inc., Tenth St. & 44th Ave., Long Island City 1, N. Y.

8-3. Time-Temperature Control. Bulletin 1501 describes Electronik Strip Chart Program Controllers with Electric Set Point Index Drive, used for automatic regulation of time-temperature control programs in metal processing and other industries. Models available, construction details, typical applications, specifications and data on auxiliary equipment is included. Minneapolis-Honeywell Regulator Company, Station 213, Wayne and Windrim Aves., Philadelphia 44, Pa.

8-4. Static Control. Booklet describing the new high-quality, Twitchell 7421 Worsted Oil for static control is available. Contains discussion of such properties as Anti-Static, Emulsion Fluidity, Emulsion Stability, Resistance to Yellowing and Odor Development, Scourability and Rust Preventive Ability. Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

8-5. Greater Profits. New booklet describes how a better product can be produced at greater profits by the use of Warner & Swasey Pin Drafters. Details and illustrates actual installations of the company's Pin Drafters, and recites case history facts on resultant cost savings, production increases and waste reduction. Well illustrated and many interesting facts and figures. Warner & Swasey Company, 5701 Carnegie Ave., Cleveland 3, Ohio.

8-6. Slashers. Booklet in color pictures and describes the various types of hi-production units by Cocker that are in operation today. The advantages of each unit is discussed and rugged construction of each unit is brought out. Cocker Machine and Foundry Company, Gastonia, N. C.

8-7. Plasticizers. A new technical data bulletin on some of the plasticizers made by the Dow Chemical Company is available. Designed to assist manufacturers in making proper selection of plasticizers, gives the sales specifications, typical properties, compatibility or solubility of these materials and their uses. The Dow Chemical Company, Midland, Michigan.

8-8. Engineering Data. New booklet available gives complete specifications, dimensions, installation diagrams on propeller fans for ventilation and comfort cooling in industrial, commercial and residential applications. Information included on the proper selection for every requirement. Chelsea Fan Blower Company, Inc., Plainfield, N. J.

8-9. Industrial Magnifiers. A 24-page authoritative guide, titled "Industrial Magnifiers—How to Choose Them," is believed to be the only book of its kind available. Optical principles of magnifiers outlined in easily understandable language and includes a magnifier selector chart and glossary. Bausch & Lomb Optical Co., Rochester, N. Y.

8-10. Uses of Persulfates. This bulletin represents a collection of literature references pertaining to various uses of persulfates. The references, mainly taken from "Chemical Abstracts" and covering the period from 1907 to 1950, have been selected to show the highly diverse uses to which persulfates may be put, and to stimulate interest in this class of peroxygen chemicals. Becco Sales Corporation, Station B, Buffalo 7, N. Y.

8-11. Roof Ventilators. Booklet describes the Breidert Air-X-Hauster as being scientifically designed to utilize the power of air currents coming from all angles to provide safe sure, positive ventilation without annoying downdrafts. Unlike ordinary ventilators which work efficiently only when wind strikes in a horizontal plane, according to the booklet, Breidert Air-X-Hausters provide positive ventilation no matter which way the wind blows. G. C. Breidert Co., 3129 San Fernando Road, Los Angeles 65, Calif.

8-12. Dust Collector. Booklet illustrated and containing line drawings tells how the cloth bag dust collectors work, and how they are installed and maintained. It also gives specifications of standard collector sizes and dimensions. Line drawings show how air circulates and passes through many thicknesses of cloth before leaving the collector. Pangborn Corporation, Hagerstown, Md.

8-13. Oxidizing Agent. New eight-page technical bulletin discusses the properties and applications of Du Pont's "Albone" 35 per cent hydrogen peroxide which is an efficient oxidizing and reducing agent. Chemical and physical properties described. E. I. Du Pont De Nemours & Company, Electrochemical Department, Wilmington 98, Delaware.

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Dyeing is better, more rapid, and uniform in a standing acid bath than in a fresh bath. The improvement in levelling, besides the correction of the water, is mainly due to a concentration of degradation products of albumin in the liquor, brought about at the expense of the wool.

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Its use increases the concentration of albumin in a fresh bath to any desired extent—converts the fresh bath into a standing bath, and prevents the wool from being further boiled out or injured.

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The loss in carding and spinning is about 3% lower than if it had been dyed without KALEPON-W. Wool dyed with chrome colors, especially brown, olive and black, without the addition of KALEPON-W shows a deterioration of up to 18% in strength and elongation compared with undyed wool; the addition of KALEPON-W to the dyebath reduces that deterioration to only about 1%, which is negligible.

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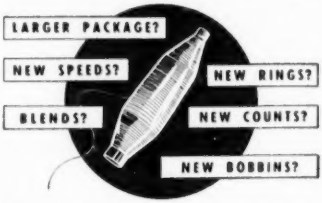

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GENERAL, ECONOMIC, MANAGEMENT

5 **FACTORING AND FINANCING**—Illustrated booklet on how factoring works, cost and credit information — TEXTILE BANKING COMPANY, 55 Madison Ave., New York, N. Y.

14 **TEXTILE WEIGHT CONTROL**—Forms 2009 and 2010, showing how Toledo Printweight weight records cut costs by eliminating human errors at the scales. Special purpose scales for the textile industry fully discussed.—TOLEDO SCALE CO., Box 97W., Toledo Sta., Toledo, Ohio.

16 **TEXTILE RESEARCH** — Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and function of department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., 350 Fifth Ave., New York, N. Y.

17 **A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK**—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

18 **FACTORING**—Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome.—L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

19 **INDUSTRIAL BUILDING**—A 32-page booklet entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for Industrial Buildings", is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings.—U. S. STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.

PLANT AND PLANT MAINTENANCE

107 **FINNELL SCRUBBERS** — Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

111 **INDUSTRIAL FANS**—Catalog sheets with specifications describing the complete line of Murray Industrial fans for plant ventilation. Seven sizes described from 24" with ⅓ HP motor delivering 5700 CFM to 54" with ¾ HP delivering 17,386 C.F.M. with advantages of heavy gauge metal construction brought out.—H. C. BIGLIN CO., 177 Harris St., N.W., Atlanta, Ga.

113 **COTTON MILL EQUIPMENT**—This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

117 **CLEANING SYSTEMS**—Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

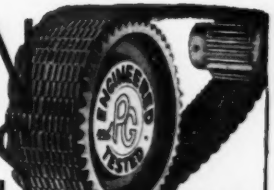
121 **STEAM GENERATORS** — Bulletin P-1 describes compact package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

127 **SOLENOID VALVES** — Bulletin "V" lists sizes from ½ inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129 **AIR CONDITIONING AND HUMIDIFICATION**—Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control.—THE BAHNSON COMPANY, Winston-Salem, N. C.

130 **LIGHTING EQUIPMENT**—Bulletin lists and describes the Crouse-Hinds line of lighting equipment which includes flood lights, searchlights, types of industrial lighting fixtures of vapor-tight, dust-tight, and

CHAIN DRIVES



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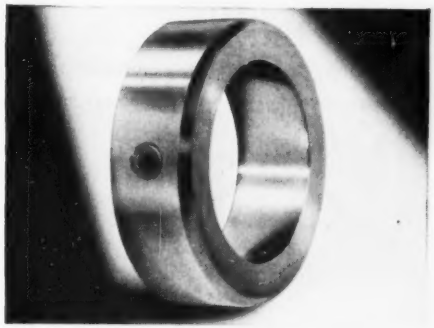

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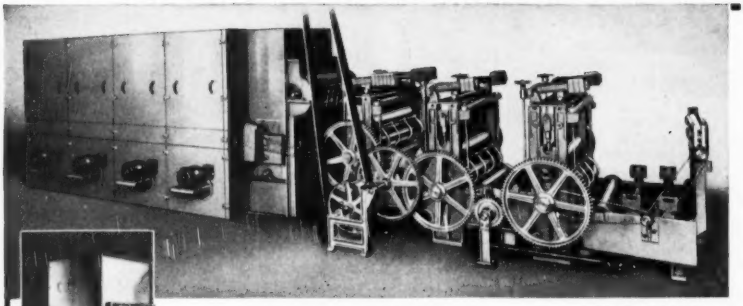

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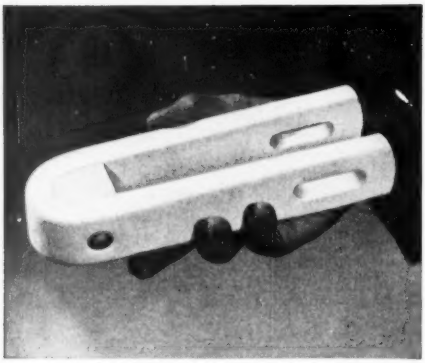

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135 COLOR CONDITIONING—Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

147 HEATING AND AIR CONDITIONING CONTROLS—Bulletin F-2287-3 describes and illustrates automatic electric controls for heating, ventilating and air conditioning systems.—BARBER-COLMAN CO., Rockford, Ill.

173 BLOWERS AND EXHAUSTERS — Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

181 AIR FILTRATION—Bulletin 234 describes and illustrates the Auto-Airmat, which is the automatic dry-type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

192 ELECTRONIC HUMIDITY CONTROL—Bulletin F-5090 gives specifications, detailed control description, installation diagrams, and comprehensive illustrated data on a "package" unit for electronic control of humidity in textile mills.—BARBER-COLEMAN CO., Rockford, Ill.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION

201 V-BELT DRIVE CATALOG—This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 HP. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

212 GATES TEXTILE ACCESSORIES—Handy Pocket-sized catalog BHM-7, fully illustrated, gives specifications of Gates Textile Accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others.—THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

221 OILER MANUAL—Highly informative and helpful manual explains in detail the proper application of Trico, visible, automatic oilers to various bearing surfaces. Construction information and valuable suggestions.—TRICO FUSE MANUFACTURING CO.—2948 N. 5th St., Milwaukee 12, Wisc.

230 HEAT RESISTING LUBRICANT — Descriptive pamphlet on Ben Boy High Heat Resisting Lubricant for use in any bearing using excessive amounts of oil or grease or frequent bearing failures.—GEORGIA-CAROLINA OIL CO., 1403 Sixth St., Macon, Ga.

237 MOTOR CONTROL—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed.—CUTLER-HAMMER, INC., Milwaukee, Wisc.

239 LICKERIN AND DOFFER BELTS—Brochure and full information on Lickerin and Doffer Belts supplied by.—TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

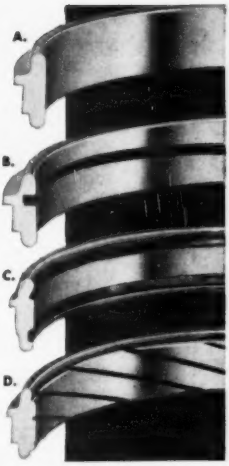
264 BALL BEARINGS FOR TEXTILE INDUSTRY—A new loose-leaf catalog illustrating, describing and listing all special ball bearings developed for textile use.—NEW DEPARTURE, Division of General Motors Corp., Bristol, Conn.

281 LOOM MOTORS—Leaflet 51B 711A describes all the characteristics of the Allis-Chalmers loom motor required for efficient loom power, high maximum torque, extra overload capacity for breaking-in operation and smooth power.—ALLIS-CHALMERS MFG. CO., Milwaukee, Wis.

INSTRUMENTS, STEAM SPECIALTIES

311 PIPING POINTERS—Industrial maintenance book covering installation and handling of piping,

GREASE RINGS



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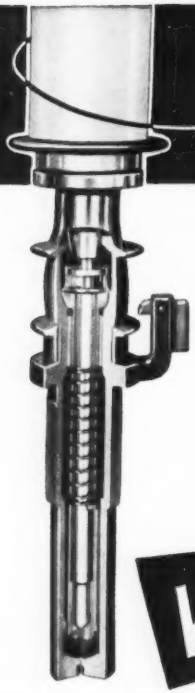

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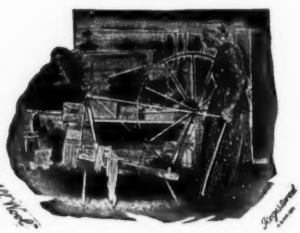

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valves, fittings. Well illustrated, practical tips.—CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.

319 **GUIDE TO CORREST INSTRUMENT SELECTION**—This completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 98170.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

324 **STROBOTAC** — Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

327 **PRESSURE REGULATORS** — Bulletin P-100 describes equipment for slashers to provide squeeze roll pressures that can be easily adjusted to the correct value for any warps being sized.—NORCROSS CORP., Newton, Mass.

337 **COUNTING DEVICES** — Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application.—TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

CARDING, SPINNING, WINDING

400 **THE TRAVELER** — Booklet on ring travelers published quarterly with a technical article on spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

401 **LUMMUS DUSTLESS, STEEL BLENDING FEEDERS**—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

409 **ROTO CONER**—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones or knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

414 **WORSTED SPINNING**—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

418 **PACIFIC CONVERTER**—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

421 **CARD ROLL COVERS**—Brochure describing the Davis Seamless Roll Covers which are made of rayon and fine combed yarns available. Described as being ribbed to pick up all lint and dust when first installed, and the same lengthwise knit makes it easy to strip off the heaviest accumulation in a few seconds. A free trial offer is included. THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

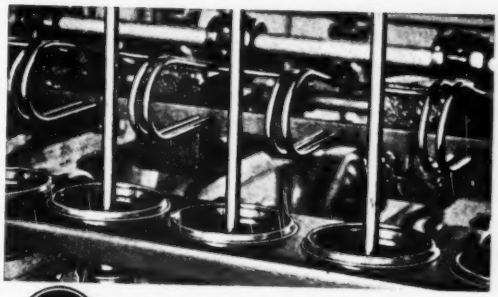
422 **MODERN TEXTILE ROLL COVERING**—Illustrated booklet on roll covering problems with charts on correct usages. Also data on Acotex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

425 **HANDY REFERENCE TABLES**—Folder showing spinning traveler speeds, sizes of ring flanges, etc.—VICTOR RING TRAVELER CO., Providence, R. I. and aGstonia, N. C.

426 **UNIRAIL UPTWISTER**—Bulletin describes Universal Winding's headless package or bobbin take-up Unirail Twister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed.—UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence 1, R. I.

447 **CONE WINDER**—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

454 **CARD AND PICKER BEARINGS** — Four-page, two-color folder which describes this manufacturer's ball and roller bearings for cards and pickers.—



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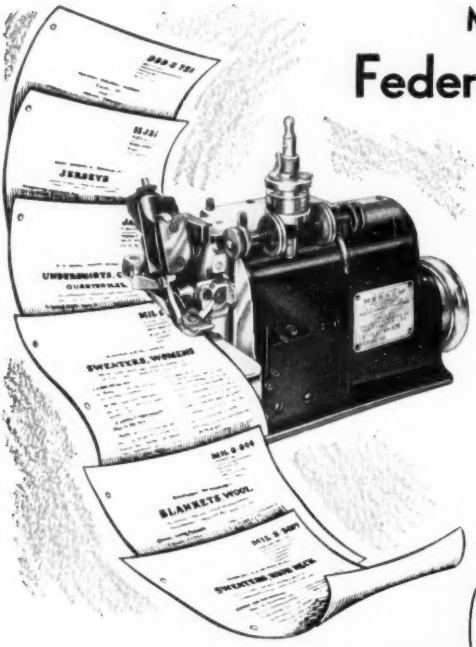

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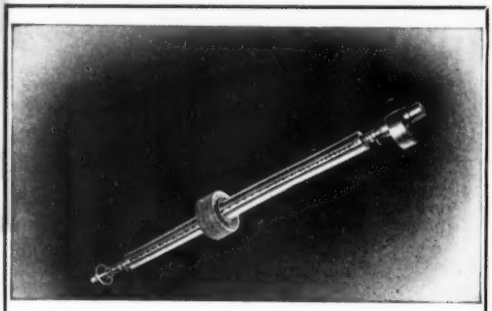

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458 **CONICAL RINGS AND FLYERS**—Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

465 **BIG BEAMS**—Brochure brings out in chart form the fact that larger beam heads afford a very desirable increase in the capacity of the beam—and it points out the reduction in time that the loom must stand idle for warp tying and beam handling.—WEST POINT FOUNDRY & MACHINE CO., West Point, Georgia.

WEAVING, SLASHING

501 **LOOMS**—An accordion type folder is available entitled "Unfolding to You the World's Largest Line of Looms". Information on all types fully discussed.—CROMPTON & KNOWLES LOOM WORKS, Worcester 1, Mass.

502 **COUNTING AND MEASURING DEVICES**—Condensed Textile Catalog illustrating and describing pick counters, hank counters, cut meters, measuring counters. Wide range of counting devices for production recording on all types of textile machinery.—VEEDER-ROOT, INC., Hartford, Conn.

504 **LOOM SUPPLIES**—Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers, brake lining and allied products.—E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

506 **SLASHING HINTS**—A 20-page booklet offering helpful hints on warp sizing. Subjects: Size cooking equipment, section beam tension, sizing selvages, cooking, use of split rods, weighing for the mix, tips on cooking equipment, storage in kettles, etc.—SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga.

508 **LOOM PRODUCTION CHARTS**—Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

517 **LOADING SYSTEM**—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices. — THE FOXBORO COMPANY, Foxboro, Mass.

533 **COTTON SLASHERS**—Brochure picturing and describing this company's complete line of cotton slashing machinery is available. Full discussion of each type slasher which is designed to handle a variety of cotton warps from the lightest gauze to the heaviest sheeting, all on one machine.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

DYEING, FINISHING, CLOTH ROOM

603 **DEPUMA**—An odorless, viscous, non-evaporating emulsion which is highly efficient as an anti-foam, useful in all phases of dyeing and printing.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

605 **CONTINUOUS AUTOMATIC EXTRACTING MACHINE**—Folder describing the most efficient method of extracting excess liquid from fibrous materials.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

610 **PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY** — Illustrated, descriptive catalog on all types of dryers for raw stock, wraps, package dyed and automatic skein yarn. Also includes Pre-Boarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd., Philadelphia, Pa.

623 **SELVAGE GUIDER**—The Marshall and Williams positive overfeed and selvage guider is described in a brochure as being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed. — MARSHALL AND WILLIAMS CORPORATION, 46 Baker Street, Providence 5, R.I.

630 **VAT DYEING OF WOOL**—Write for Calco Technical Bulletin No. 797 outlining fundamental dyeing procedure, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

637 **BALL BEARING TURN TABLE**—Leaflet describing this 48" diameter steel turn table for use in mills where the cloth is delivered in rope form to trucks and the trucks are placed in position ahead of a Scutcher or Cloth Opening Machine. Advantages discussed.—BIRCH BROTHERS, INC., 32 Kent St., Somerville, Mass.

640 **"CIRCULATING" SKEIN DYEING MACHINE**—Booklet illustrating the principle behind the stainless steel machine which have "Revolutionized Skein Dyeing," for filament and spun synthetic yarns in skein form.—SMITH, DRUM & CO., Philadelphia 33, Pa.

653 **GUIDERS AND TENSION DEVICES**—Illustrated and discribed are the Mount Hope Precision Guiders and open width Tension Devices used for accurate, straight line guiding of open width goods. Bulletin SG-PG.—MOUNT HOPE MACHINERY CO., 15 Fifth St., Taunton, Mass.

DYESTUFFS, CHEMICALS, SOAPS

701 **MAGNESIUM APPLICATIONS**—Case history information on magnesium application in the textile field, published bi-monthly with latest developments in the magnesium industry.—DOW CHEMICAL CO., Midland, Mich.

706 **RHONITE RESINS**—Booklet describes the Rhonite Resins as being developed to import handle to fabrics ranging from stiffness through full resiliency to silky suppleness, depending on the demand of the season. Full information and uses given.—ROHN & HAAS COMPANY, Washington Square, Philadelphia, Pa.

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716 **WIDE RANGE SCOURING AND WETTING AGENT** — 4-page folder describing Houghton's concentrated, non-ionic, synthetic detergent and wetting agent, Cerfak 1300, usable over entire pH range for efficient scouring and wetting.—E. F. HOUGHTON & CO., Philadelphia 33, Pa.

753 **TRITON X-100**—Booklet available describing this highly concentrated detergent and wetting agent. Main uses fully discussed and chemical properties brought out.—ROHM & HAAS COMPANY, Philadelphia 5, Pa.

756 **TEXTILE SPECIALTIES**—Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 80 Rockefeller Plaza, New York 20, N. Y.

765 **HOSIERY FINISHES AND FORMULAS**—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

766 **DU PONT PEROXIDE BLEACHING SYSTEMS** —New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

773 **TECHNICAL CHEMICAL DATA SHEETS**—Complete set for dyeing, printing and finishing operation, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., 190 Warren St., Jersey City 2, N. J.

KNITTING

802 **REINER SIMPLEX MACHINE**—Illustrated catalog describes this double-knit machine as being a very popular unit for the glove trade, outwear, lingerie, beach wear and other similar items.—ROBERT REINER, INC., Weehawken, N. J.

823 **VARIABLE STRIPER**—Booklet available describing Supreme's complete line of automatic Variable Stripers and Pattern Placer Machines.—SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., Brooklyn 6, N. Y.

830 **CIRCULAR KNITTING MACHINE** — Brochure pictures and describes the products which can be made on the Brinton Large Diameter circular knitting machines for cotton, wool, rayon, silk, nylon, and synthetic blends.—H. BRINTON COMPANY, Kensington Ave., and "M" St., Philadelphia, Pa.

831 **CIRCULAR KNITTING MACHINE** — Brochure pictures and describes the products which can be made on the Brinton small diameter circular knitting machine. Examples of the variety of products which can be made are pictured and the machines described.—H. BRINTON COMPANY, Kensington Ave. and "M" St., Philadelphia, Pa.

SEWING MACHINES

901 **LOCKSTITCH MACHINE WITH AUTOMATIC LUBRICATION** — Bulletin illustrating new unit for single needle stitching on wide variety of articles. Form 886—WILLCOX & GIBBS SEWING MACHINE CO., 214 West 39th St., New York City.

921 **FELDLOCK "DUALFEED" MACHINE**—Bulletin No. 802, illustrating and describing the heavy duty feed-off-the-arm felling machine for overalls, work pants, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING

1004 **PITTSBURGH COLLAPSIBLE CARGOTAINERS**—Stacked they lock in place and permit visible inventory; collapsed they rest in small area. Base permits entry by all types of lift trucks. Write for Brochure MH-15.—PITTSBURGH STEEL PRODUCTS COMPANY, Pittsburgh 30, Pa.

1008 **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1029 **ELECTRICAL INSULATING MATERIALS**—Bulletin GF-50 describes 5 high-strength plastics: Diamond vulcanized fiber; Vulcoid, A C-D dielectric material; Dilecto, a laminated thermosetting plastic; Celoron, a fabric-base molded plastic; and micabond, mica in most usable form. Full information on each in forms available. —CONTINENTAL-DIAMOND FIBRE COMPANY, Newark, Dela.

1032 **ELECTRIC CHAIN HOISTS**—Bulletin 852 describing Robbins & Myers Type "JC" Electric Chain Hoists. Capacities 500, 1000 and 2000 pounds.—ROBBINS & MYERS, INC., HOIST & CRANE DIV., Springfield, Ohio.

MISCELLANEOUS

1110 **CUTTING MACHINES**—A collection of specification sheets and general descriptive matter covering cutters for thread waste, staple, fiber, etc., complete description and uses.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1111 **BRUSHES**—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1115 **TEXTILE WRAPPING MACHINES**—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made. HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122 **BALING PRESSES**—Bulletins available describing this company's line of motor-driven and hydraulic baling-presses for finished-goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

AUGUST, 1952

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SUPPLIERS News

WHAT THEY ARE DOING

New sales engineers appointed by **J. E. Rhoads & Sons** are: Charles B. Blanchard, replacing W. A. Garrison in New York state, with headquarters in Syracuse; Donald C. McClure, covering the states of Illinois and Missouri; and Warren A. Johnson, the territory of Iowa and parts of Minnesota, South Dakota, and Kansas. Mr. McClure and Mr. Johnson will have their headquarters in Chicago.

The **Oxford Sales and Service Co.** has been appointed franchise distributor for **The Colson Corp.** for the state of Connecticut. Colson's office in Hartford, Conn., has been closed.

Manning, Maxwell & Moore, Inc., held a two-day centennial celebration on June 6 and 7 in honor of the one hundredth anniversary of its Ashcroft pressure gauge line of products. Among the events participated in by stockholders, executives, and distributors were a luncheon and a tour of the new 300,000 sq ft plant at Stratford, Conn.

John B. Caldwell, president of Caldwell Chemical Co., was recently elected a director of **American Metallic Chemicals Corp.** Caldwell Chemical is exclusive sales agent for American Metallic.

Celanese Corp. of America has established a new organization known as Celanese Central, S. A., to provide closer liaison with the activities of foreign affiliates of the firm, except Canada. Kenneth G. Donald is president. Twenty-five years of service with the corporation were recently celebrated by John P. Holmes, vice-president.

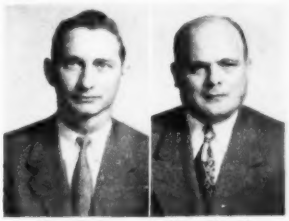
New branch office industrial managers for the Industrial Division of **Minneapolis-Honeywell Regulator Co.** are: Robert M. Woodside, Cleveland; John O. Paull, Los Angeles; and Lee Aplin, San Francisco.

MacBeth Corp. has announced that its subsidiary, the Macbeth Sales Corp., has been appointed sales representative in the United States and Canada for the Nickerson-Hunter cotton colorimeter.

Edmund T. Flanagan has been elected vice-president in charge of sales for **The Fairbanks Co.,** New York, N. Y. He has been with the firm for more than thirty years.

An expansion program totaling $100,000 has been completed by **Quaker Rubber Corp.,** division of **H. K. Porter Co., Inc.**

John M. Neuffer and Hugh Cash were recently added to the field engineering staff of **Steel Heddle Manufacturing Co.,** and are working out of the Greenville, S. C., office.



Mr. Cash **Mr. Neuffer**

Miss Abbie L. Shay, textile designer, has established the **Abbie Shay Studio** at 2350 Croydon Road, Charlotte, N. C. and is doing textile designing of various types for the textile mills.

Wamesit Warper Co., Lowell Mass., is now operating under the name of **Allen Warper Co.** R. Udell Thornton, president of Allen Warper Co., New Bedford, Mass., is president-treasurer of the company. William L. Peterson, assistant treasurer-secretary, is in charge of production.

Kewanee Boiler Corp. and **Ross Heater & Manufacturing Co., Inc.,** divisions of American Radiator & Standard Sanitary Corp., have combined to form a new company, **Kewanee-Ross Corp.** Both units will continue to operate as before, but with broader scope of operations made possible. W. Bradford Russell is president of the new firm.

Dr. Milton M. Platt has been made associate director of research at

17th

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October 6-11, 1952

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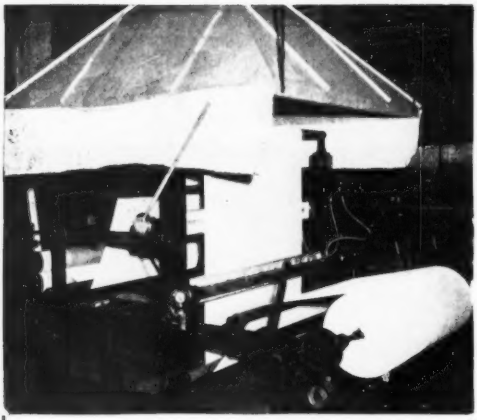

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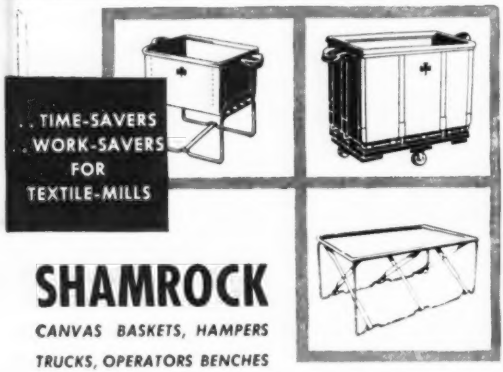

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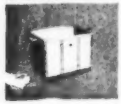

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SUPPLIERS News
WHAT THEY ARE DOING

Fabric Research Laboratories, Inc., in charge of all physical and engineering investigations. Dr. George Thomson is assistant director, in charge of chemical investigations. Chauncy C. Chu and Henry Morgan are now on the senior research staff, as is Myron J. Coplan, formerly with the Institute of Textile Technology. Dr. Simon Williams represented the laboratories at the International Conference on Fiber Blending in Edinburgh, Scotland, June 2-6.

A. E. Staley Manufacturing Co. has announced the following personnel appointments: Natt K. Hammer, manager of the Chicago Office, with R.

Mr. Barnes

T. Murray as assistant manager; Donald A. Barnes, technical sales representative with headquarters at Charlotte, N. C.

Bernice Judelson has been added to the laboratory staff of **Emkay Chemical Co.** She will direct research and development for new fiber dyeing assistants and new permanent finishes.

William E. Conlon, previously with H. & B. American Machine Co., is now sales manager for **Product Sales, Inc.,** 21 Vernon St., Whitman, Mass. He succeeds Richard K. Butler, now executive vice-president of Machinecraft, Inc.

Walter A. St. Clair has been appointed to head **Hyster Co.'s** newly created national accounts office at 4636 West Washington Blvd., Chicago, Ill. He has been with the firm since 1945.

Maurice J. McCarthy has joined **Hardesty & Co.** as director of sales. He will work in cooperation with W. W. Fischer, now general manager.

Standard Pressed Steel Co. has announced the appointment of Francis J. Kinsella as regional sales manager in the midwest with headquarters in the firm's Detroit office. Succeeding him as manager of the Detroit territory is Daniel F. Hulgrave, Jr. Marshel Moorhouse is now a sales representative operating in the New York City territory; Walter H. Cunnington, St. Louis; and James C. Humphries, Los Angeles.

Dr. Sidney Cohen has been appointed research and development chemist for **Hart Products Corp.**

General Electric Co. has announced plans for construction of a transformer manufacturing plant at Rome, Ga., which will provide employment for approximately 1700 persons. The firm's switchgear development laboratory officially opened in Philadelphia on June 19.

R. G. Woodbury, former vice- president, was elected vice-chairman of the board of **Textile Banking Co.** T. R. Stearns, executive vice-president; George E. Ambrose, vice-president; W. R. Hennie, assistant vice-president and assistant secretary; J. F. Doran, assistant vice-president; J. D. Lorigan, assistant vice-president; A. J. Purtell, assistant treasurer; F. C. Baker, assistant treasurer; and W. H. Allen, assistant secretary.

Hart Products Corp. has announced the appointment of Milton J. Greene as New England sales and technical representative. He will have his headquarters in New Bedford, Mass.

William F. Kennedy has been named representative in the Georgia-

Mr. Kennedy

Tennessee area for **Arnold, Hoffman & Co., Inc.,** with headquarters in the firm's Charlotte, N. C., office.

Charles A. Knutton, Jr., with the firm for the past fifteen years, has been appointed vice-president and

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MILTON GIVES YOU TRUE DIMENSIONAL STABILITY without objectionable deflection or distortion!
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SUPPLIERS News
WHAT THEY ARE DOING

manager of the **Standard Mill Supply, Inc.**, of Charlotte, N. C. He replaces A. Benson Davis, resigned.

Westvaco Chemical Division of **Food Machinery & Chemical Corp.** has announced the appointments of P. F. Tinsley as director of district sales and W. O. Holleman as eastern district sales manager.

John P. Swaggart has joined **The Bullard Clark Co.** as chief chemist in the Jacobs rubber division. He was previously with Gates Rubber Co.

The Midwest offices of **Beckman Instruments, Inc.**, were recently moved to 7145 West Belmont Ave., Chicago 34, Ill. The phone number is Berkshire 7-4627. This branch is under the direction of George Kincaid.

The National Aniline Division of **Allied Chemical & Dye Corp.** has plans for construction of a new chemical plant at Moundsville, W. Va., for manufacture of nitrobenzene and aniline. The Solvay Process Division and Solvay Sales Division have been consolidated and are known as The Solvay Process Division. It is responsible for production and sale of alkali, chlorine, and related products.

Norman S. Cassel has been elected vice-president of **Interchemical Corp.**,

Mr. Cassel

Mr. Rothemich

with William J. Rothemich succeeding him as divisional president of the textile colors division.

William P. Russell has joined **Textile Specialty Co.** as sales representative in Georgia, Alabama, and Tennessee, handling the Sidebotham patented lap spinning tape.

Arthur H. Burt has been made director of sales for **The Sherwin-Williams Co.** He was previously director of the firm's north central sales region.

W. H. T. Furry has joined **The Foxboro Co.** as associate director of the firm's training school staff.

Export sales activities of **Diamond Alkali Co.'s** subsidiary, **Kolker Chemical Works, Inc.**, have been transferred to the firm's export sales division in New York. S. B. Honour, who handled export sales for Kolker, will continue in that capacity for Diamond.

The **Charles P. Lauman Co.**, 99 Bedford St., Boston 11, Mass., has been appointed franchise distributor in the New England area for the **Colson Corp.'s** complete line of casters, industrial trucks, etc. Colson's Boston sales office has been closed, and inquiries are being referred to the newly appointed distributor.

Eight new regions have been created by **Westinghouse Electric Corp.'s** Sturtevant Division, with the following managers: J. H. Spencer, northeastern region, with headquarters in Boston; H. F. Brush, middle Atlantic, Philadelphia; Robert

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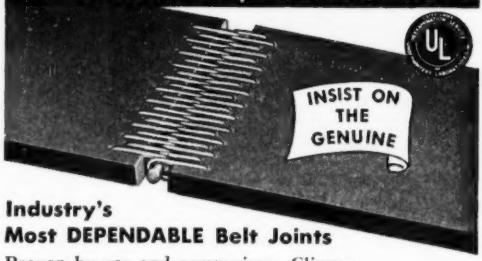

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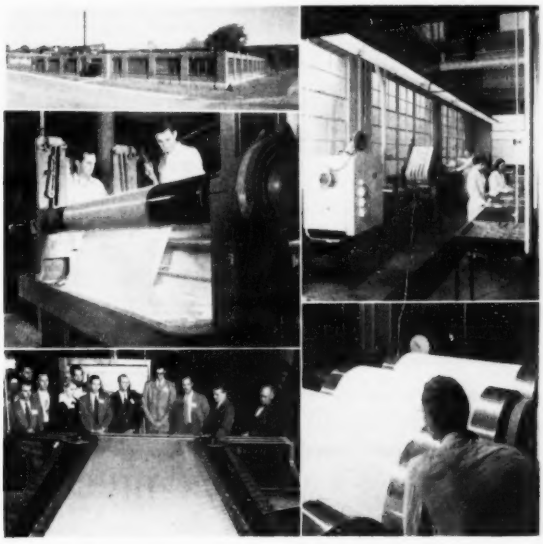
Tennessee Eastman Dedicates Sales Service Laboratory

Tennessee Eastman Co.'s new sales service laboratory building was recently dedicated at an open house held for the Northeast Tennessee section of the American Chemical Society. The building covers 16,840 sq ft and is divided into four major sections. One is devoted to problems relating to dyeing and finishing cellulose acetate and mixtures of acetate with other fibers. The Textile section includes a pilot plant containing commercial-sized machines. The textile laboratory is also equipped with miniatures of plant-size dyeing machinery.



Mercer, north-central, Cleveland; D. W. Davis, Jr., northwestern, Chicago; W. J. Oonk, southwestern, St. Louis; D. M. Hutchinson, southeastern, Atlanta; H. W. Rainey, Jr., south-central, Pittsburgh; and John F. Munder, eastern, New York. J. C. Fink has been made engineering manager of the Industrial Products division; and John K. Hodnette, sales manager; Edward O. Boshell was recently elected a director. The Westinghouse Order of Merit, highest company award for distinguished service, was presented to Otis Rae, southeastern district manager, of Atlanta, Ga. The firm has also announced plans for construction of a multi-million dollar industrial and commercial lighting equipment plant at Vicksburg, Miss., and a plant at Raleigh, N. C., for the manufacture of watthour electric meters.

Warren Steam Pump Co., Inc., is now represented in the Cleveland, O., area by **Process Industries Engineers, Inc.,** Pittsburgh, Pa. Arch T. Miller is district manager, with headquarters at 12417 Cedar Road, Cleveland.

A new placement program for recruiting and training college-graduated engineers has been inaugurated by **Worthington Corp.** The department absorbs the functions of the firm's former sales personnel division, and is under the direction of J. J. Thompson.

Frank J. Fancher, commercial vice-president-Condulet, has retired after 40 years service with **Crouse-Hinds Co.,** Syracuse, N. Y. He was succeeded by Russell P. Northrup. William A. McAuley will assist Mr. Northrup in his present capacity as manager of the department.

O. J. Fleming has been elected a vice-president of **Union Special Ma-**

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MODEL PD-1 for textiles in loose or compressible forms—3" penetration.

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SUPPLIERS News
WHAT THEY ARE DOING

chine Co. A new representative, Fred S. Booth, has been appointed to succeed Ray Hinton in the western Pennsylvania and eastern Ohio territory. Mr. Hinton's territory now includes parts of Ohio, Kentucky, and West Virginia, with offices in Cincinnati.

Thomas J. Leemon, Adolf Selnau, and Arthur E. Kallinich, each with forty years or more of service, were recently honored by **Veeder-Root, Inc.**

Harris H. Bucklin, Jr., has been appointed to succeed R. M. Mauldin, retired, as Charlotte, N. C., sales representative for **Universal Winding Co.**

A chapter of the Scientific Research Society of America has been established at the Beacon Laboratories, main research center of **The Texas Co.** This charter is the fifth to be granted to an industrial laboratory.

Atlas Powder Co. has established an office at 1 Montgomery St., San Francisco, Cal., with Henry C. S. Swab as technical sales representative.

American Cyanamid Co. has moved its Boston offices to 1055 Commonwealth Ave. The telephone number is Stadium 2-6000.

B. F. Goodrich Chemical Co. has announced the appointment of Robert E. Score as sales representative for

Mr. Score

the firm's organic chemicals on the east coast and in the southeastern states. He will have his headquarters in the company's New York office.

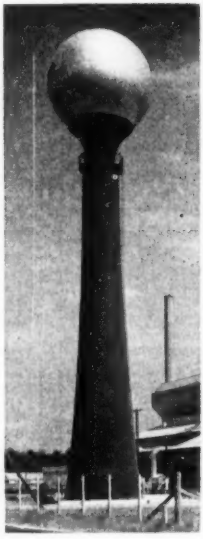
Joseph Worpenberg received a diamond service pin in recognition of his 50 years of service with **Emery Industries.** The presentation was made by John J. Emery, president of the firm.

The Aquex Development & Sales Corp. has announced the appointment of **Moreland Chemical Co., Inc.**, Spartanburg, S. C., as district representatives for the sale of its resins for textile finishing.

The public relations and publicity department of **American Viscose Corp.** has been transferred to the firm's Philadelphia headquarters. Harry L. Dalton, vice-president in charge of this department, is assisted by C. Stuart Brown. Work is under way on the installation of Alaska's first pulp mill by the Ketchikan Pulp Co., a new concern controlled jointly by the Puget Sound Pulp and Timber Co. and the American Viscose Corp. It will produce high grade dissolving wood pump for processing into rayon and cellophane.

The assets of **Duesberg-Bosson of America, Inc.**, in Fitchburg, Mass., have been liquidated with the sale of its machinery, equipment, and two plants.

Spherical Tanks on Tubular Towers



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News in Brief

(*Continued from page 75*)

knitted underwear fabrics in order to secure low cost dimensional stability is being studied by a large underwear manufacturer in conjunction with a chemical supplier. The process is carried out on conventional finishing equipment, including a loop dryer, thus requiring no additional specialized machines. Besides adding shrink resistance to the garment, the resin treatment is said to promote a hand superior to the untreated cotton fabric.

German Mills to Keep Modern. At a recent meeting of the Industry and Trade Exchange in Stuttgart, Alfons Eckert, Kuchen, told members that it was vital that the German textile industry should have renovated workshops and machines. Only through such measures would the rationalization of the industry be possible and German trade remain competitive in world markets.

Cotton Duck Order Revoked. A 30 per cent expansion in the cotton duck production capacity has permitted revocation of order M-53, according to the U. S. Department of Commerce. The purpose of M-53 was to insure an equitable distribution of rated orders among all producers of cotton duck to guarantee maximum production and to reduce the disruption of normal distribution brought about by defense buying.

No Preferential Treatment for "Distressed" Areas. The textile industry now is excluded from any preferential treatment in government-negotiated purchases although textile companies are located in distressed geographical areas which get special consideration. Conclusion of the panel is that the (certified distress) area approach of Defense Manpower Policy No. 4 is inappropriate to the textile industry and cannot be applied equitably. In short, certification of distressed areas for special treatment would result merely in alleviating distress in one area of the textile industry at the expense of other areas without furthering the general objectives that are anticipated by the application of the area approach generally to industry.

Time and Motion Study and Management Clinic Date. The Sixteenth Annual Time and Motion Study and Management Clinic sponsored by the Industrial Management Society will be held on November 5-7, 1952 at the Sheraton Hotel, Chicago. More than 2000 industrial engineers, works managers, plant superintendents, and supervisors are expected to attend the technical sessions.

Upholstery and Plastics. An estimated 1.5 chairs out of every 10 are upholstered in plastic materials, according to the Plastic Coatings & Film Association. This figure, computed by the Association on the basis of a recent poll of its members comprising a majority of the production of both plastic-coated materials and all-plastic sheeting, is being confirmed by furniture manufacturers currently showing at the summer furniture market in the American Furniture Mart and the Merchandise Mart.

Hosiery Repair Machine. A new hosiery repair machine has been introduced by the Dutch firm of Brunwilh N. Z. (Voorburgwal 22, Amsterdam-C, Netherlands). The machine is fitted with a special

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Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection meta shields afford . . . Watch your spinning room efficiency increase!

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needle which is operated by a suction tube that is connected to a small diaphragm. The suction of the cylinder is created by the activation of the diaphragm at one end which is directly driven by an electric motor of either 220 or 110 volts. According to the speed of the motor, the speed of the needle is regulated. A potentiometer control enables four running speeds between 300 and 3,000 rpm to be varied by a simple foot control. The motor drive of the new machine is somewhat heavier than that used in earlier types of machines, but this is counterbalanced by the obviation of the heavy flywheel drive which was previously necessary. It is said that the price of the new machine compares favorably with those produced in other countries.

Sportswear Fabric Introduced. A windproof and water-repellent cotton fabric called Windbar has been introduced by Wellington Sears. Offered in either Zelan or Impregnole finishes, Windbar is closely woven of 2-ply yarns, both warp and filling, comes in twelve top sportswear colors and white, and is specifically designed for ski clothes, active sportswear, raincoats, children's snowsuits, and other apparel where maximum weather performance and good looks help sell.

Dynel-Filled Pillow. Dynel-filled pillows have been marketed by N. Sumergrade & Sons. The pillows contain a garnetted dynel batt which provides soft, buoyant support, and dynel's permanent resilience permits dry cleaning or washing without packing, matting, or the formation of lumps or knots, according to an announcement.

Loopless Toe Is Boon. The loopless toe attachment for full-fashioned hosiery machines is proving to be a boon to the stocking industry. It has cut out a large part of the looper home industry, which was difficult to control, expensive, and damaging to looper machinery. The labor savings have been sufficient to eliminate the skilled operator shortage in this operation, thus providing a reservoir of looper operators for seamless hosiery and heavy denier constructions.

German High Draft Frame. Following the development in Spain of a new high draft system for cotton ring spinning, the German Research Institute for the Textile Industry has perfected a comparable system. Use of the conventional leather (or plastic) apron has now been completely obviated. Drafting is conducted between the drawing rolls, and there are two drafting zones. Between these zones is placed a funnel type guide. The primary draft may be varied between 2 and 4.5; then follows a draft of 5 to 25 in the main zone, thereby permitting a total draft of 100. The new system produces more even yarn, affords reduction of fly, greater fiber control, greater extensibility and greater yarn durability, according to claims. The frame is expected to produce more

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EAST POINT, GEORGIA
Hugh Williams & Company, Toronto Canada—Canadian Representative

economical yarns, and at present several different models are being tested in working conditions to ascertain which is the most effective system.

Textile Men to Back N.E.T.F. Fund Campaign. Goal of the current fund campaign for New England Textile Foundation scholarships is $100,000 in the form of contributions from textile manufacturing and finishing concerns, converters, and representative firms in allied fields. N.E.T.F. funds are allocated to scholarships, purchase of needed instructional equipment, and faculty aid at four New England textile colleges: Bradford Durfee Technical Institute, Lowell Textile Institute, New Bedford Textile Institute, and Rhode Island School of Design. Melville Weston is general chairman of the New England Textile Foundation.

German Perlon Hosiery Exports. Production of Perlon hosiery in sheer weights has been started for the export market by the Arwa Mill, Backnang (Wurtemberg) Germany. Company officials reported frankly that the price was feared too high for the American market. 15 denier 54 gauge stockings were quoted at about $14.60 a dozen at the factory.

Chair Wins Good Design Award

Winner of one of the "Good Design" awards in the Good Design Exhibition at the Merchandise Mart, was this attractive Troyloafer, shown occupied by Jeanne Cameron. It is a casual contour outdoor chair covered with bright red and white checked Saran woven fabric. The chair won on the basis of simple mechanism and exceptional comfort.

These selections and awards are sponsored each year by The Museum of Modern Art, New York, jointly with The Merchandise Mart, Chicago.

Joint Buying by Armed Services. Clothing, textiles, and footwear will be bought for the armed services by a joint buying agency beginning October 1, thus centralizing for the first time the uniform and textile procurement of the Army, Navy, Air Force, and Ma-

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"THERE IS HARDLY ANYTHING IN THE WORLD THAT SOME MAN CANNOT MAKE A LITTLE WORSE AND SELL A LITTLE CHEAPER, AND THE PEOPLE WHO CONSIDER PRICE ONLY ARE THIS MAN'S LAWFUL PREY." (John Ruskin)

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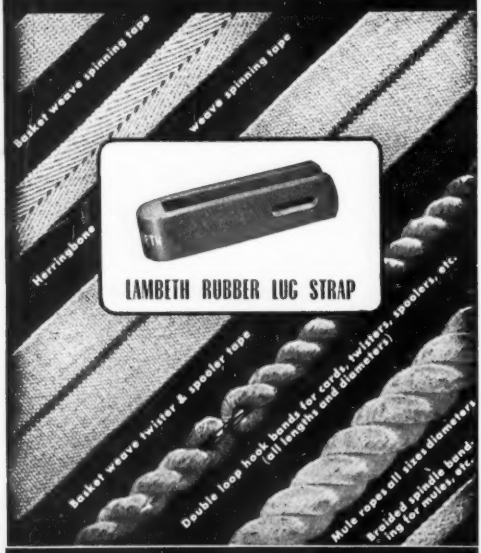
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rine Corps. The new agency will take over facilities of the New York Quartermaster Procurement Agency.

Irish Ban Knitted Imports. The Irish Ministry of Industry and Commerce has prohibited the importation of knitted wool and wearing apparel in Eire. Wool cardigans, pullovers, jerseys, and similar articles are specifically banned.

Manual for First Aid. A manual titled "Standard Procedures for First Aid Workers in Industry" has been issued by the American Mutual Liability Insurance Company. The manual provides an authoritative guide book of emergency first aid treatment for use in industrial plants.

Shanghai Woolen Mills Production. Since the formation of the Chinese "People's Republic," the Shanghai wool spinning mills have raised their production by 600%, according to an East German report.

Fiber E For Outerwear. Knitted outerwear manufacturers are looking towards Fiber E for novel constructions to stimulate sales. Since this fiber curls when treated with a dilute solution of caustic soda, knitters find that they can easily duplicate seersucker and similar effects by the required wet finishing. The Fiber E yarn is conventionally knitted in varying patterns; the finished fabric or garment is then treated with caustic soda. The result is an abrasion resistant, novelty effect which would be costly to duplicate by trick knitting.

The Return of Silk. The return of silk as a fashion fabric has been dramatized through many outlets by the International Silk Association (USA) during the last six months.

Manual of Corporate Giving. Practical do's and don't's for use in planning business contributions under the five per cent tax exemption privilege of the Internal Revenue Code are presented in "The Manual of Corporate Giving" issued by the National Planning Association. H. Christian Sonne, chairman of the NPA Board of Trustees, said that NPA's purpose in issuing the manual ". . .is not to argue the case for corporate giving or to plead the needs and merits of any field of activity or type of recipient organization. . .it is to provide objective advice to the corporate donor who has already decided to give."

Selling Stockings in Germany. In Germany a new method of selling Perlon stockings has been introduced. Three matching stockings are sold in a packet. Oftentimes one stocking becomes worn or damaged long before the other, and it is to meet such a contingency that the new "threesomes" have been introduced by the Elizabeth Feinstrumpf GmbH of Frankfurt-am-Main. Another Frankfurt stocking firm, Sylvana Stocking Co., has introduced a guarantee certificate for its stockings. The company will replace any stockings which are not up to manufacturing standards.

Attachment for Knitting Machines. The Quartermaster Corps Textile Materials Engineering Laboratory in Philadelphia has developed a knitting machine attachment which introduces a balance into the knit structure, thereby offsetting the tendency of knitted garments to become "baggy" through normal use. The attachment may be fitted onto the conventional type of circular knitting machine and changes the loop formation to more symmetrical form.

Film Demonstrates High Speed Photography. A 15-minute 16mm sound motion picture which provides a graphic demonstration of the ability of a high speed motion picture camera to "magnify time" is available from the Eastman Kodak Company on a loan basis. The film points out that a high speed camera exposes 100 ft of motion picture film in about three seconds, and time is multiplied by a factor of about 200; therefore any movement or action which is too fast for the eye to follow can be readily studied on high speed film.

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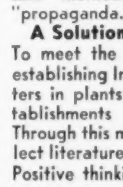

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Each month TEXTILE INDUSTRIES covers important developments in opening, picking, carding, spinning, twisting, winding, throwing, weaving, braiding, knitting, dyeing, bleaching and finishing of WOOL, COTTON, SYNTHETICS and SILK.

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Kaiser-Sanders Electronics Firm Chooses Nashua

Waltham, Michigan Link Means Work for 100-200 in Old Textron Mills

NASHUA, N. H., June 20—The Kaiser Manufacturing Company of Willow Run, Mich., a subsidiary of Kaiser-Frazer Corporation, announced today that they have leased the former Jackson Mills property of Textron Inc., for an electronics plant.

The new firm will be known as Kaiser-Sanders Electronic Division. Sanders Associates Inc., of Waltham, Mass., a nationally known firm in the electronics industry, will be associated with Kaiser and will move its research and development laboratories to Nashua early in July.

This News Item from the Public Press EXPLAINS THE NECESSITY for

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IN THE IMMEDIATE MARKET

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IN NASHUA, NEW HAMPSHIRE

on

TUESDAY, AUGUST 12, 1952

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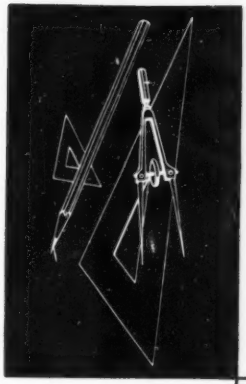
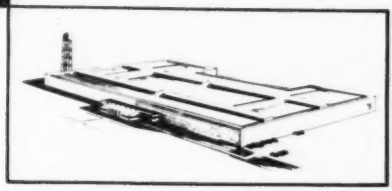


From Fibre to Fabric—



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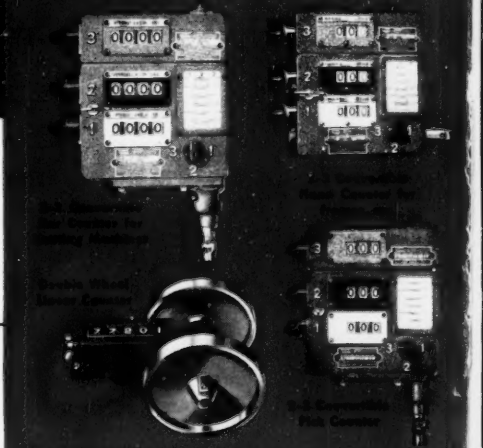

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